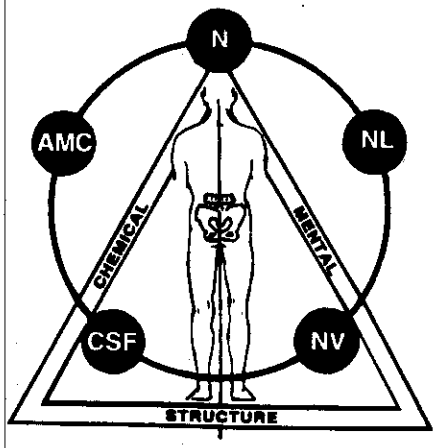
1996 - 1997

Proceedings of the Annual Meeting of the

INTERNATIONAL COLLEGE OF APPLIED KINESIOLOGY - U.S.A.

Presented August 22 through August 25, 1996
Dearborn, Michigan



There appears to have been an error in the last issue of the Proceedings of the Members of the International College of Applied Kinesiology. The paper entitled *"A Discussion of the Pyramidal Distributions of Weakness"* by Michael D. Allen, D.C., DIBAK, DABCN, should have contained the following:

> Special thanks goes to Dr. Frederick Carrick for his insight and wisdom in the production and presentation of his findings regarding this subject. The information was obtained through the attendance of his classes, without which this paper could not have been written.

A schedule of classes in Chiropractic Neurology can be found by calling the Logan College of Chiropractic in St. Louis, MO.

My apologies for the omission of this statement go out to Dr. Carrick.

A Message From the Chair

Dr. Robert Porzio

The members of the International College of Applied Kinesiology-U.S.A. are fortunate to share their insights, concepts and research through the papers presented in this issue of the *Proceedings*. The ICAK-U.S.A. continues to thrive as a Mecca in which members have the opportunity to present their observations and research results. These published works document the first steps toward the furtherance and development of the authors' hypotheses, concepts and procedural techniques. We invite all members to participate in this endeavor in the future.

Congratulations to all of the contributors and a special thanks to Dr. John Heidrich, Publications Committee Chair, and Dr. David Leaf, *Proceedings* Committee Chair, for all of their help. We look forward to seeing you at the Annual Meeting in Dearborn, Michigan.

INTRODUCTION

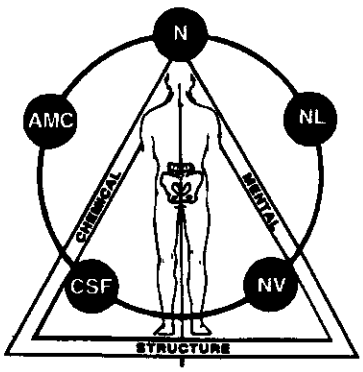
This thirty-eighth collection of papers from members of the International College of Applied Kinesiology-U.S.A. contains 29 papers by 18 authors. The papers will be presented by the authors to the general membership at the Annual Meeting of ICAK-U.S.A. in Dearborn, Michigan, August 22-25, 1996. The authors welcome comments and further ideas on their findings. You may talk with them at the meeting or write them directly; addresses are given in the Table of Contents.

The manuscripts are published by ICAK-U.S.A. as presented by the authors. There has been no effort to edit them in any way; however, they have been reviewed by the Publications Committee for originality and to determine that they follow the "Instructions to Authors" published by the ICAK-U.S.A. The primary purpose of the ICAK-U.S.A. in publishing the Proceedings is to provide an interchange of ideas to stimulate improved examination and therapeutic methods in applied kinesiology.

It should be understood that the procedures presented in these papers are not to be construed as a single method of diagnosis or treatment. The ICAK-U.S.A. expects applied kinesiology to be used by physicians licensed to be primary health care providers as an adjunct to their standard methods of diagnosis and treatment.

There are three divisions of the Proceedings of the Annual Meeting of the International College of Applied Kinesiology-U.S.A. Division I consists of papers for members' information. Division II contains papers inviting constructive comments to be published in future editions of the Proceedings. Division III is for constructive comments on papers published in Division II and for subjects that might be included in "Letters to the Editor" of a refereed journal. Papers will be put in Division I or II at the author's request. It is expected that authors will choose Division I for papers such as anecdotal case reports, thought-provoking new ideas that have not been researched, and other types of papers that are for the membership's general information. It is expected that Division II will include papers that have a research design, or those the author has thoroughly studied and worked with and believes to be a viable approach of examination and/or treatment. Studies to test methods developed by others, often called validation studies, fit well here. This area also lends itself to editorial-type comments about the practice of applied kinesiology and its procedures. Division III is somewhat similar to the "Letters to the Editor" section of refereed journals. It provides a forum for members to comment on research design or other factors in papers previously presented. Its purpose is for us to improve the quality of our presentations and, in some cases, to provide rebuttal to presented material. Comments on papers will only be published in this area if the paper was presented in Division II inviting constructive criticism.

Neither the International College of Applied Kinesiology-U.S.A., its Executive Board, nor the membership, nor the International Board of Examiners, International College of Applied Kinesiology, necessarily endorses, approves of, or vouches for the originality or authenticity of any statements of fact or opinion in these papers. The opinions and positions stated are those of the authors and not by act of publication necessarily those of the International College of Applied Kinesiology-U.S.A., the Executive Board or membership of the International College of Applied Kinesiology-U.S.A., or the International Board of Examiners, International College of Applied Kinesiology.



INSTRUCTIONS TO AUTHORS
Proceedings of the ICAK - U.S.A.

Manuscripts are reviewed for format, technical content, originality, and quality for reproduction. There is no review for authenticity of material.

The ICAK-U.S.A. recognizes that the usual procedure for selection of papers in the scientific community is a blind review. However, the purpose of The Proceedings of the ICAK-U.S.A. is to stimulate creative thinking and critical review among its members. These papers are distributed only to the members of the ICAK-U.S.A. for general evaluation, and for the members to put into perspective the validity of the described approaches. The purpose is to put before the membership primary observations that may lead to scientific investigations, new areas of research, and in-depth study, inspiring progress in the field of applied kinesiology.

Statements and opinions expressed in the articles and communications in The Proceedings of the ICAK-U.S.A. are those of the author(s); the editor(s) and the ICAK-U.S.A. disclaim any responsibility or liability for such material.

The current ICAK-U.S.A. Status Statement is published with The Proceedings of the ICAK-U.S.A. It is recommended that procedures presented in papers conform to the Status Statement; papers that do not conform will be published and identified in the Table of Contents as failing to conform. It is recommended that examination or treatment procedures that fail to conform to the ICAK-U.S.A. Status Statement be supported by statistical studies, literary references, and/or any other data supporting the procedure.

Papers are published in three divisions: I) papers intended by the author as informative to the membership and not inviting critical review; II) papers inviting critical and constructive comments from the membership in order to improve the total value of the paper. Comments may be made on such items as research design, methods presented, clarity of presentation, and practical use in a clinical setting. The author must include with his/her paper written indication of desire for the paper to be included in the section inviting critical review or for informative purposes.
III) The third section is for review comments on papers published in Division II. These papers are for constructive review. Opinions or editorials with negative connotations only may be rejected.

Manuscripts are accepted by the ICAK-U.S.A. for consideration to publish with the understanding that they represent original unpublished work. Acceptance of the manuscript by the ICAK-U.S.A. does not necessarily imply acceptance for publishing. The author may appeal any paper rejected to a committee composed of members of the Publications and Research Advisory Committees. The decision of this committee on publishing the paper will be final.

Following are the current requirements for papers submitted for publication:

1) The paper must be an original work and deal specifically with applied kinesiology examination and/or treatment techniques. Various techniques may be discussed if they are correlated with applied kinesiology manual muscle testing examination.

2) Papers that do not include a clearly labeled Abstract, Introduction, Discussion, Conclusion and Reference list will be returned to the author for revision. Papers that discuss the outcome of a research study must also include separate sections labeled Materials/Methods and Results. Papers that describe clinical procedures or protocols should include a concise step-by-step outline or flow chart for each procedure described in the paper. The text of the paper, regardless of the subject material, should include numbered references. Note that the standard format for journal and text-

book references is reviewed at the conclusion of this article. Because of reproduction processes, however, we have provided examples eliminating italics, underlining, etc. All papers must follow these requirements. No font formatting is acceptable. The only exceptions are papers which are Commentaries or Critical Reviews. (See explanation listed below.)

3) Quotations must be short, usually no longer than three lines, and should be referenced, giving credit to the original author. All referenced articles, books, or persons other than the author must be properly referenced at the end of the paper. (See examples listed below.)

4) Any quotation of copyrighted material that is longer than that noted above must be accompanied by permission to print from the author and/or copyright holder. The permission must specifically note that the material is to be printed in The Proceedings of the ICAK-U.S.A., copyrighted by the International College of Applied Kinesiology-U.S.A.

5) Any material that is copyrighted by the author must include permission for the ICAK-U.S.A. to reproduce the paper and any accompanying graphs, illustrations, etc., at any time and in any manner that the ICAK-U.S.A. so chooses.

6) All artwork must be original, or permission to print must be obtained from the author or artist, referenced in the article, and a copy of the authorization sent along with the article at the time of submission for printing in The Proceedings. Photographs must be original black-and-white glossy prints.

7) Terminology or procedures that might be unfamiliar to some readers should be referenced at the end of the paper. Avoid using nontechnical terms such as, "blow-out," "cleared," "fixed," or "TL'ed." Papers that contain unsupported and unsubstantiated claims for efficacy of the therapy will be returned to the author.

8) Each page of the paper should be identified by an abbreviated title, the author's last name and a page number, flush left with a 1 inch margin.

9) The publication standards for the health care professions typically call for more details for the following types of papers:

Research Studies - An investigation into the clinical efficacy of diagnostic and therapeutic procedures.
Case Reports - An account of the diagnosis, treatment and outcome of an unusual or otherwise significant case.
Case Studies - A comparative assessment of a series of related cases.
Clinical Procedures - Informative papers that review the procedural aspects of diagnostic or therapeutic approach - clinical protocols.
Hypothesis - A theory that explains a set of facts and presents a basis for further investigation.
Clinical Observations - Unique observations that involve manual/mechanical muscle testing and related procedures.
Commentary - Editorial-like, in-depth essays on matters relating to the clinical, professional, educational, and/or legal aspects of applied kinesiology.
Critical Review - A critique or commentary on a paper that previously appeared in Division II of The Proceedings.

With the exception of a Commentary or a Critical Review, all papers must conform to the following format. Note that each section must be clearly labeled.

Title & Author's Name

Abstract: A brief description of the purpose of the study, basic procedures, main findings and principle conclusions.

Introduction: Summarize the rationale for the study or observation. Give background material when available and introduce the reader to what was done and why.

Materials and Methods: (for research studies) Describe the subjects and identify the methods and procedures. Present sufficient detail to allow others to reproduce the procedures for comparison of results.

Results: (for research studies) Present results in a logical sequence and summarize the important observations. Include appropriate tables and illustrations.

Discussion: Discuss the implications of the findings and any limitations. Emphasize any new and important aspects of the findings. Discuss how the findings may relate to other relevant studies or observations.

Conclusions: Unqualified conclusions and statements not directly supported by data or observation must be avoided. Make any recommendations that are appropriate and relevant to the subject matter.

Summary of Procedures: Step-by-Step or Flow-Chart style description of diagnostic and therapeutic procedures described in the paper.

References: The numbered references that correspond to the text of the paper.

For journal articles: Author(s), Title in Quote " ", Name of Journal, Vol., No., (Month/Year).
e.g. Schmitt, Jr., Walter H., "Fundamentals of Fatty Acid Metabolism - Part II," The Digest of Chiropractic Economics, Vol. 28, No. 2, (Sept.-Oct./1985).

For textbooks: Authors(s), Title, (City of Publication, Name of Publisher, Copyright Date).
e.g. Walther, David S., Applied Kinesiology, Volume I - Basic Procedures and Muscle Testing (Pueblo, CO., Systems DC, 1981).

10) The body of the article should be double-spaced on plain paper. Articles must be flush left. No papers typed on office letterhead will be accepted. Use a plain, nondecorative font (i.e., Times New Roman, New Century Schoolbook, etc.). The manuscript must be an original with dark print, on one side of the paper only, to ensure adequate reproduction in The Proceedings of the ICAK-U.S.A. The margins on both sides of the paper must be a minimum of 1 inch, and the top and bottom margins must be a minimum of 1 inch when relating to 8 1/2 inch x 11 inch letter-size paper. European authors should make note of the copy height of the American standard 11 inch paper size, which relates to approximately 28 cm.

11) Authors are encouraged to send articles to the Central Office on computer disk. This will be allowed as long as all formatting procedures mentioned above are followed. Disks should be sent to the Central Office in a padded envelope with the marking "Magnetic Computer Disk Enclosed" to ensure safe delivery. Authors must note on the disk the name and author of the document, and on what type of software it is written (i.e. Microsoft Word 6.0, MacWrite 4.0, etc.).

Please reread, in its entirety, the Instructions to Authors to insure that your paper will be suitable for publication.

Manuscripts that do not meet the above qualifications will be returned to the author, with recommendations for bringing the paper under ICAK-U.S.A. guidelines for possible future publication.

The articles to be published should be sent to the Publications Committee in triplicate (the original and two copies), c/o ICAK-U.S.A., 6405 Metcalf Avenue, Suite 503, Shawnee Mission, KS 66202-3929, (913) 384-5336, FAX (913) 384-5112

APPLIED KINESIOLOGY STATUS STATEMENT

International College of Applied Kinesiology-U.S.A.

The International College of Applied Kinesiology-U.S.A. provides a clinical and academic arena for investigating, substantiating, and propagating A.K. findings and concepts pertinent to the relationships between structural, chemical, and mental factors in health and disease and the relationship between structural faults and the disruption of homeostasis exhibited in functional illness.

A.K. is an interdisciplinary approach to health care which draws together the core elements of the complementary therapies, creating a more unified approach to the diagnosis and treatment of functional illness. A.K. uses functional assessment measures such as posture and gait analysis, manual muscle testing as functional neurologic evaluation, range of motion, static palpation, and motion analysis. These assessments are used in conjunction with standard methods of diagnosis, such as clinical history, physical examination findings, laboratory tests, and instrumentation to develop a clinical impression of the unique physiologic condition of each patient, including an impression of the patient's functional physiologic status. When appropriate, this clinical impression is used as a guide to the application of conservative physiologic therapeutics.

The practice of applied kinesiology requires that it be used in conjunction with other standard diagnostic methods by professionals trained in clinical diagnosis. As such, the use of applied kinesiology or its component assessment procedures is appropriate only to individuals licensed to perform those procedures.

The origin of contemporary applied kinesiology is traced to 1964 when George G. Goodheart, Jr., D.C., first observed that in the absence of congenital or pathologic anomaly, postural distortion is often associated with muscles that fail to meet the demands of muscle tests designed to maximally isolate specific muscles. He observed that tender nodules were frequently palpable within the origin and/or insertion of the tested muscle. Digital manipulation of these areas of apparent muscle dysfunction improved both postural balance and the outcome of manual muscle tests. Goodheart and others have since observed that many conservative treatment methods improve neuromuscular function as perceived by manual muscle testing. These treatment methods have become the fundamental applied kinesiology approach to therapy. Included in the A.K. approach are specific joint manipulation or mobilization, various myofascial therapies, cranial techniques, meridian therapy, clinical nutrition, dietary management, and various reflex procedures. With expanding investigation there has been continued amplification and modification of the treatment procedures. Although many treatment techniques incorporated into applied kinesiology were pre–existing, many new methods have been developed within the discipline itself.

Often the indication of dysfunction is the failure of a muscle to perform properly during the manual muscle test. This may be due to improper facilitation or neuromuscular inhibition. In theory some of the proposed etiologies for the muscle dysfunction are as follows:

- Myofascial dysfunction (micro avulsion and proprioceptive dysfunction)
- Peripheral nerve entrapment
- Spinal segmental facilitation and deafferentation
- Neurologic disorganization
- Viscerosomatic relationships (aberrant autonomic reflexes)
- Nutritional inadequacy
- Toxic chemical influences
- Dysfunction in the production and circulation of cerebrospinal fluid
- Adverse mechanical tension in the meningeal membranes
- Meridian system imbalance
- Lymphatic and vascular impairment

On the basis of response to therapy, it appears that in some of these conditions the primary neuromuscular dysfunction is due to deafferentation, the loss of normal sensory stimulation of neurons due to functional interruption of afferent receptors. It may occur under many circumstances, but is best understood by the concept that with abnormal joint function (subluxation or fixation) the aberrant movement causes improper stimulation of the local joint and muscle

receptors. This changes the transmission from these receptors through the peripheral nerves to the spinal cord, brainstem, cerebellum, cortex, and then to the effectors from their normally-expected stimulation. Symptoms of deafferentation arise from numerous levels such as motor, sensory, autonomic, and consciousness, or from anywhere throughout the neuraxis.

Applied kinesiology interactive assessment procedures represent a form of functional biomechanical and functional neurologic evaluation. The term "functional biomechanics" refers to the clinical assessment of posture, organized motion such as in gait, and ranges of motion. Muscle testing readily enters into the assessment of postural distortion, gait impairment, and altered range of motion. During a functional neurologic evaluation, muscle tests are used to monitor the physiologic response to a physical, chemical, or mental stimulus. The observed response is correlated with clinical history and physical exam findings and, as indicated, with laboratory tests and any other appropriate standard diagnostic methods. Applied kinesiology procedures are not intended to be used as a single method of diagnosis. Applied kinesiology examination should enhance standard diagnosis, not replace it.

In clinical practice the following stimuli are among those which have been observed to alter the outcome of a manual muscle test:

- Transient directional force applied to the spine, pelvis, cranium, and extremities;
- Stretching muscle, joint, ligament, and tendon;
- The patient's digital contact over the skin of a suspect area of dysfunction termed therapy localization;
- Repetitive contraction of muscle or motion of a joint;
- Stimulation of the olfactory receptors by fumes of a chemical substance;
- Gustatory stimulation, usually by nutritional material;
- A phase of diaphragmatic respiration;
- The patient's mental visualization of an emotional, motor, or sensory stressor activity;
- Response to other sensory stimuli such as touch, nociceptor, hot, cold, visual, auditory, and vestibular afferentation.

Manual muscle tests evaluate the ability of the nervous system to adapt the muscle to meet the changing pressure of the examiner's test. This requires that the examiner be trained in the anatomy, physiology, and neurology of muscle function. The action of the muscle being tested, as well as the role of synergistic muscles, must be understood. Manual muscle testing is both a science and an art. To achieve accurate results, muscle tests must be performed according to a precise testing protocol. The following factors must be carefully considered when testing muscles in clinical and research settings:

- Proper positioning so the test muscle is the prime mover;
- Adequate stabilization of regional anatomy;
- Observation of the manner in which the patient or subject assumes and maintains the test position;
- Observation of the manner in which the patient or subject performs the test;
- Consistent timing, pressure, and position;
- Avoidance of preconceived impressions regarding the test outcome;
- Nonpainful contacts — nonpainful execution of the test;
- Contraindications due to age, debilitative disease, acute pain, and local pathology or inflammation.

In applied kinesiology, a close clinical association has been observed between specific muscle dysfunction and related organ or gland dysfunction. This viscerosomatic relationship is but one of the many sources of muscle weakness. Placed into perspective and properly correlated with other diagnostic input, it gives the physician an indication of the organs or glands to consider as possible sources of health problems. In standard diagnosis, body language such as paleness, fatigue, and lack of color in the capillaries and arterioles of the internal surface of the lower eyelid gives the physician an indication that anemia can be present. A diagnosis of anemia is only justified by laboratory analysis of the patient's blood. In a similar manner, the muscle-organ/gland association and other considerations in applied kinesiology give indication for further examination to confirm or rule out an association in the particular case being studied. It is the physician's total diagnostic work-up that determines the final diagnosis.

An applied kinesiology-based examination and therapy are of great value in the management of common functional health problems when used in conjunction with information obtained from a functional interpretation of the clinical history, physical and laboratory examinations and from instrumentation. Applied kinesiology helps the physician understand functional symptomatic complexes. In assessing a patient's status, it is important to understand any pathologic states or processes that may be present prior to instituting a form of therapy for what appears to be functional health problem.

Applied kinesiology-based procedures are administered to achieve the following examination and therapeutic goals:

- Provide an interactive assessment of the functional health status of an individual which is not equipment intensive, but does emphasize the importance of correlating findings with standard diagnostic procedures;
- Restore postural balance, correct gait impairment, improve range of motion;
- Restore normal afferentation to achieve proper neurologic control and/or organization of body function;
- Achieve homeostasis of endocrine, immune, digestive, and other visceral function;
- Intervene earlier in degenerative processes to prevent or delay the onset of frank pathologic processes.

When properly performed, applied kinesiology can provide valuable insights into physiologic dysfunctions; however, many individuals have developed methods that use muscle testing (and related procedures) in a manner inconsistent with the approach advocated by the International College of Applied Kinesiology-U.S.A. Clearly the utilization of muscle testing and other A.K. procedures does not necessarily equate with the practice of applied kinesiology as defined by the ICAK-U.S.A.

There are both lay persons and professionals who use a form of manual muscle testing without the necessary expertise to perform specific and accurate tests. Some fail to coordinate the muscle testing findings with other standard diagnostic procedures. These may be sources of error that could lead to misinterpretation of the condition present, and thus to improper treatment or failure to treat the appropriate condition. For these reasons the International College of Applied Kinesiology-U.S.A. defines the practice of applied kinesiology as limited to health care professionals licensed to diagnose.

TABLE OF CONTENTS

Division I - Informative Papers

Division II – Critical Review Papers

(Does not conform to ICAK Status Statement.)*

Dr. George J. Goodheart - Research Reports

DIVISION I - INFORMATIVE PAPERS

EXTREMITY RANGE OF MOTION AND FUNDAMENTAL PROBLEMS

Douglas N. Hibbard, D.C.

ABSTRACT

The passive internal thigh rotation test is discussed. Described by different A.K. authors in the past, the test can indicate different neuromusculoskeletal conditions. Relevant determinants of the test are discussed, and a procedure is presented which helps organize its analysis.

INTRODUCTION

Certainly all of us like to feel we are making significant changes in a patient's health by correcting problems fundamental to the symptom picture. In this paper I would like to discuss the measurement of lower extremity range of motion as an aid to muscle testing in defining certain important neuromusculoskeletal problems.

One measurement of extremity range of motion is the passive internal thigh rotation test. (P.I.T.R.) Holding both ankles, the supine patient's legs are internally rotated with equal force and the difference in degree of rotation is noted. Dr. Walther writes in his synopsis that differences in passive thigh rotation may reflect dural tension.(1) Attention to fixations, coccygeal and iliolumbar ligament problems reduce dural tension and produce equal P.I.T.R. In recent seminars, Dr. Goodheart has shown P.I.T.R. changes in response to factors such as: 1) need for phosphorylated B vitamins, 2) need for mineral ions, 3) diaphragm muscle dysfunction. I have observed that cross crawling in the supine position often increases P.I.T.R. difference if neurologic disorganization is present.

DISCUSSION

Clearly many different important factors affect the P.I.T.R. test. The anatomical and physiological relationship to differences in P.I.T.R. and dural tension is uncertain. Looking at this phenomena from the point of view of a pyramidal paresis pattern presents another possibility. Dr. Allen writes that the piriformis, among other lower extremity extensors, is neurologically inhibited on the side contralateral to the pyramidal paresis.(2)

Because the pirifomis is an important external rotator of the thigh, its inhibition would allow for increased ipsilateral P.I.T.R. Signe Brunnstrom, M.A. in his book, Clinical Kinesiology(3), notes that the femur rotates inwardly on the pelvis from toe off throughout the swing phase of gait, essentially throughout the whole phase of thigh flexion. This correlates well with the muscle tonus patterns of the pyramidal distribution of weakness; that is the lower extremity flexors are facilitated and the lower extremity extensors, including the piriformis, are inhibited on the side of the foot forward gait.

Dr. Walther writes that Dr. Goodheart treated vertebral fixations to affect the P.I.T.R. and presumably also dural tension. Vertebral fixations that cause aberrant vertebral coupling also account for a pyramidal paresis pattern. It is quite possible that dural tension is largely a result of the presence of pyramidal paresis.

A pyramidal paresis situation is not the only reason for differences in P.I.T.R. Two notable additional influences result from the P.L.U.S. presentation and the piriformis syndrome.(4) Both are situations that find the piriformis over facilitated and can therefore decrease internal thigh rotation.

The often immediate changes in P.I.T.R. after a stimulus or correction is impressive to the doctor and patient; however, deciding which neuromusculoskeletal conditions are causing

the difference in P.I.T.R. demands a systematic approach. I believe the analysis is worth the effort because the P.I.T.R. test is a simple, objective barometer of important aspects of the patient's health. I have found the following protocol helpful in organizing the important influences of the thigh rotation response:

1. Check bilaterally the degree of P.I.T.R. on the supine patient.

2. Have the patient perform slow heterolateral cross crawl.

3. If the P.I.T.R. difference increases, and generalized muscle weakness ensues, neurological disorganization is likely present. Find the factors which strengthen the muscle weakness and treat them.

4. Heterolateral cross crawl now should not produce a change in P.I.T.R. or cause generalized muscle weakness. In some situations thigh rotation is now equal in which case you have already found the main problem.

5. If unequal thigh rotation remains, have the patient increase the distortion by actively internally rotating the leg on the side of greater P.I.T.R. This generally weakens a strong indicator muscle.

If pyramidal paresis is present, you should find relative to the side of increased P.I.T.R.: 1.) ipsilateral bicep weakness 2) contralateral wrist extensor and leg flexor weakness. (Please see Dr. Allen's paper previously footnoted for additional findings related to the paresis pattern). This is corrected by addressing joint fixation/mechanoreceptor dysfunction. To find the causal joint dysfunction, have the patient again hold the leg inward, therapy localize all suspect articulations on the ipsilateral side. Those that cause a two point strengthening should be adjusted with coupled motion technique.(5) Generally any difference in P.I.T.R. will now no longer be apparent.

If patient initiated inward rotation does not cause indicator muscle weakness and P.I.T.R.is greater on the left, have the patient externally rotate the right leg and test an indicator muscle. If this weakens, a P.L.U.S. situation is usually involved, especially the P. of the P.L.U.S., the piriformis. Correcting P.L.U.S. involvement returns the legs to equal internal thigh rotation.

If the patient's presenting diagnoses include a sacroiliac sprain, the piriformis may have a compensatory hypertonicity on the sprained side. This will affect the P.I.T.R. and make its evaluation more difficult. Please see Dr. Leaf's Applied Kinesiology Manual 5 for treatment of this "piriformis syndrome" and for treatment of the P.L.U.S. pattern as identified by Dr. Goodheart.

Conclusion

When used with other correlating indicators, the P.I.T.R. test is a good indicator of important neuromusculoskeletal problems. This paper summarizes observations related to this test and presents a method for systematically identifying particular influences of P.I.T.R. I hope this will allow the reader to use this indicator more usefully.

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2. Allen, Michael D., D.C., NMD, DAAPM, DACAN, DABCN, DIBAK, Pyramidal Distribution of Weakness, pp. 33-45, Proceedings of the Annual Meeting of ICAK Vol. 1, 1995-96.

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5. Allen, Michael D., D.C., NMD, DAAPM, DACAN, DABCN, DIBAK, Clinical Aspects of Vertebral Coupling, pp. 47-52 Proceedings of the Annual Meeting of ICAK Vol 1, 1995-96.

Applied Kinesiology Management of Attention Deficit Disorder and Hypotonia

Harry Lefkowitz, D.C., DIBAK

Abstract

Case history of a 15-year-old male diagnosed with attention deficit disorder and hypotonia is presented. The patient had been on 20 mg of Ritalin for approximately two years. Structural, biochemical findings and treatment are described

Introduction

Diagnosis of attention deficit disorder has risen dramatically in the United States over the last number of years. The most common medical treatment for this condition is the prescription of Ritalin. Ritalin, also known as methylphenidate, is an amphetamine-like drug and is classified by the FDA in the same category as cocaine and methamphetamine.

Attention Deficit Disorder (ADD) is characterized by short attention span, distractibility, impulsivity, poor concentration and poor memory. Learning may be impaired.

Hypotonia, a diagnosis that occasionally accompanies attention deficit disorder, is characterized by a loss of upper body muscle tone and poor neurological coordination.

The most common adverse reactions to Ritalin are nervousness and insomnia. Other reactions include skin rash, arthralgia, exfoliative dermatitis, anorexia, nausea, loss of appetite, abdominal pain, weight loss and tachycardia.(1) In Applied Kinesiology, attention deficit disorder and related disorders such as hyperkinesia and dyslexia are associated with neurologic disorganization, hypoglycemia, food sensitivities, cranial faults and spinal lesions.(2)

Case History

A 15-year-old male was brought into the office by his parents. His parents stated that their son had been exhibiting symptoms of ADD since he was 8 years old. He would act out in class, often disrupting the group. Teachers complained that he was not paying attention in class and he would often seem to be daydreaming and "be in his own world" while the lesson was proceeding. At home, homework would take an excessively long time. The parents had to give close supervision or else he would easily get involved in another activity. He was put in a smaller group in a resource room for certain subjects. At age 10 educational testing was performed which showed no specific deficit or dyslexia. The child was maintaining grade level performance, but barely.

Consultation with school counselors brought a recommendation to continue the resource room and an urging to consult a physician for a Ritalin prescription.

Due to hesitation by the parents, the Ritalin recommendation was put off.

However, two years ago the problem exacerbated. Homework would take hours longer than necessary. The child became completely inattentive in class and did not want to attend school.

Due to the worsening of his condition, the parents agreed to start him on 10 mg of Ritalin and shortly moved up to 20 mg daily.

At the initial consultation, the parents stated that their son had not made much progress in the

last two years since he had been on Ritalin. His teachers reported that he was more focused in the classroom. At home, however, his homework was still taking "all night" and the parents had to give constant supervision or else it would not get done. He was maintaining grades of C or D in many of his classes.

Due to concern over the long-term effects of Ritalin, the parents went out searching for other methods of treatment for their son.

Some adverse reactions were already being exhibited such as difficulty sleeping at night and anxiety. The boy also seemed to be more withdrawn in the last few months.

The parents also related that their son had been experiencing coccygeal pain for approximately one year.

During the entire consultation the boy said nothing and his eyes were downcast. Only prodding by the parents elicited a yes or no answer at times.

FINDINGS

Gait examination was normal with proper contralateral arm and leg movements. When tested in the standing position, neurological disorganization was found. Bringing the right leg forward weakened the contralateral arm flexors. K27 tested negative except when the patient was walking which brought out the hidden problem.(2) With the patient supine, manual muscle testing was performed. The anterior deltoid on the right was weak in the G1 and G2 sub-max modes.(3) All of the muscles were strong. G2 sub-max testing as described by Schmitt is a patient-initiated muscle test. The patient is instructed to push against the tester's hand in the direction of the muscle pull. Immediately upon attempting a few degrees of concentric contraction, the tester then pushes against the patient's force in the direction of eccentric contraction.(3)

Food testing was performed by oral insalivation and manual muscle testing. Positive findings included citrus, dairy, corn syrup and white flour.(5)

Testing was performed to see which nutrients negated positive foods and also would strengthen the weak anterior deltoid. The supplements found were Basic Nutrients 4 and zinc picolinate by Thorne research.(4) RNA from Standard Process also strengthened the anterior deltoid as did L-glutamine. Small intestine reflexes negated the food sensitivities, and these were treated along with the master set points.(6) A series of structural and reflex corrections were made. I continued the evaluation using the NOT technique protocol as described by Ferreri.(7) Cranial corrections included palatine spread, sphenoid tilt, and vestibular correction. Vestibulo-ocular, vestibulo-sphenoid, and spheno-ocular cranial reflexes were corrected as described in NOT procedure.(7) Ocular lock was evaluated.(2) Weakness was found in various positions of eye tracking. Correction was made by ocular muscle stretching.(7) Challenge with reading numbers and holding a pen caused the ocular lock fault to occur.(7) Oral testing with homeopathic neurotransmitter solutions was performed.(8) Epinephrine strengthened the anterior deltoid. Testing was done to see which nutrient in the biochemical pathway from tyrosine to epinephrine was strengthened. High potency vitamin C was the nutrient which was indicated.

A 7-day dietary diary was obtained. Not surprisingly, the diet was rich in white flour, sugary drinks, cakes, cupcakes and pasta. Hair tissue mineral analysis was obtained.(9) The major finding was a very high copper reading. The copper measured at 6.6 mg%. The normal reading is 2.5 mg%. The iron reading was found to be low.

Muscle testing showed that iron and vitamin C were necessary to help eliminate the copper.

DISCUSSION

The parents of this patient had decided to take the child off Ritalin soon after treatment and dietary changes were implemented. At first they were fearful that their son would have a regression, but this did not happen.

Three months after the initial intervention there was notice-

able improvement in the speed with which homework was done. The patient parents observed that supervision was not necessary. No complaints were initiated by the teacher or school in regard to inattentiveness. Steady progress was being made toward improvement. Also, the parents reported that their son was more communicative and generally happier. Unfortunately, attempts at changing his diet were met with resistance and little change was made in this regard. He did agree to cut out citrus and to cut down on sugar intake. Perhaps progress would be faster if this patient complied with dietary changes. He did take his supplements faithfully.

In Applied Kinesiology a number of factors have been associated with attention deficit disorder and related problems. Goodheart correlated the work of Doman and Delacotto and expanded on the treatment of neurologic disorganization.(2) K27, ocular lock, gait patterns, limbic technique and PRYT have all been used for treatment of neurologic disorganization.(2) Ferreri expanded on this technique in his NOT procedure. Food sensitivities, dysbiosis and toxic metals testing have been detailed by Lebowitz.(5)

My approach to this patient's condition included a comprehensive applied kinesiology approach. Using these methods, the patient was successfully able to get off Ritalin with subsequent disappearance of adverse reactions of sleeplessness and anxiety. The patient made good improvement in his behavior and academics following the above recommendations.

Conclusion

In view of the potential addictive nature of Ritalin, it is important to have a procedure which can be helpful to the ADD patient. Applied kinesiology, structural and biochemical corrections may prove to be effective in this light and is continuing to improve with additional input from many practitioners.

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Common Structural Faults In Competitive Swimmers

John K. Moore D.C., C.C.N., C.C.S.P.

Abstract

I believe most people in the general public think that elite athletes are fit and healthy individuals. I know from working with many competitive athletes that this is often not the case. I thought it would be interesting to test a group of some of the best swimmers in the U.S. to see if any members of this sample group showed any hidden problems.

Introduction

Applied Kinesiology testing was done on 15 swimmers competing at The 1996 U.S. Olympic Trials. Five different musculoskeketal areas were randomly chosen to be evaluated. Each of these tests were performed on each swimmer at some point during the week long swimming event. Results were tabulated and converted into percentages for presentation in this paper.

The five "faults" tested for were Temporal Bulge, cervical subluxations, supraspinatus muscle weakness, latisimus dorsi muscle weakness, cephalad lift technique (coccyx challenge). Each of these areas were evaluated on a bilateral basis.

Discussion

These areas were chosen for the following reason. Temporal Bulge, simply a common cranial fault I find in my practice. This gave me a way to quickly access at least one area that contributes to overall cranial balance. Cervical subluxations are common in patients in my office but are they common in non-symptomatic athletes? The two muscles I chose to test are related to shoulder function and as we know this is extremely important to swimmers. The challenge for a positive cephalad lift technique gave me a window of observation into possible dural torque patterns. These tests were not all performed at one time on a given swimmer. Some of the participants were tested for 1 or 2 faults and then tested for several more 2 to 5 days later.

Results

These are expressed in a descending order of occurrence by percentage.

Cervical subluxation	93%
Latisimus Dorsi weakness	47%
Coccyx challenge positive	40%
Supraspinatus weakness	27%
Temporal Bulge cranial fault	13%

Conclusion

It is evident that in this small sampling of athletes many hidden structural problems did exist. One must wonder how many athletic injuries are due to an accumulation of these asymptomatic structural faults that, over time allow overt injuries to occur. I believe this to be a common occurrence in sports and encourage doctors that work with a sports team to check as many of the athletes as possible and not just those suffering with symptomatic injuries.

Oriental Face Diagnosis and Hidden Weakness

Craig S. Rubenstein, D.C.

Abstract

The use of patient or doctor induced manipulation of oriental face diagnosis regions combined with applied kinesiology manual muscle testing procedures to find hidden muscle/organ weakness along with an appropriate treatment protocol will be discussed.

Introduction

Applied kinesiology is a multifaceted, incredibly flexible approach to diagnosis and treatment. It has the ability to assimilate other forms of diagnosis and treatment protocols. The use of oriental face diagnosis is one more way applied kinesiology can utilize another form of diagnosis and broaden its application via the use of manual muscle testing. This technique was developed after thinking about two things, first Dr. Wally Schmitt's use of referred pain regions and tactile stimulation with manual muscle testing (1) and second, the vertical wrinkles many people have over the bridge of the nose (liver region) which are accentuated when someone is expressing their anger on their face.

Procedure

If the patient is showing signs and symptoms of a particular muscle or organ dysfunction, but the related muscles test strong in the clear and do not or no longer show positive therapy localization to its 5 factors of the IVF, check for hidden weakness using oriental face diagnosis.

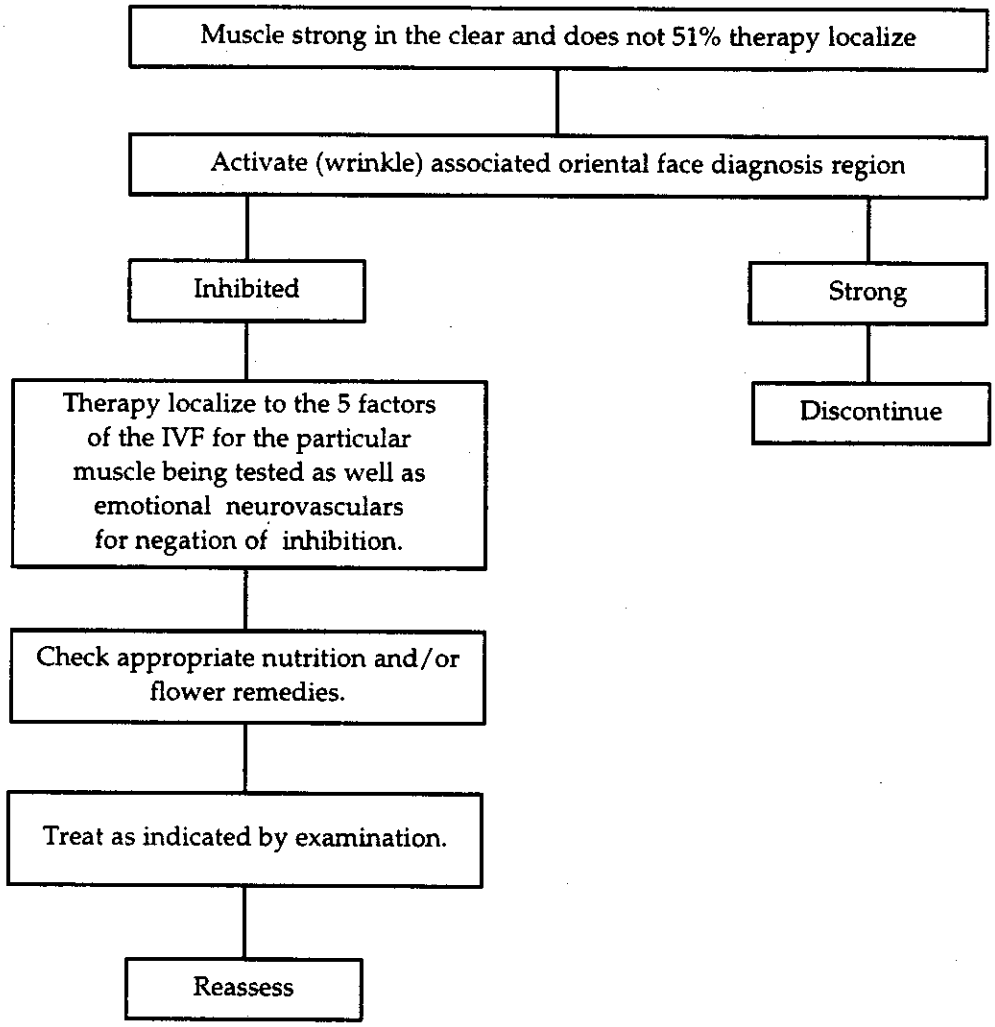
There are two ways to accomplish this. The first is to have patient frown, smile, pucker their lips, squint, lift eyebrows, etc., in order to wrinkle the area relating to the muscle/organ relationship. The second way is for the doctor to wrinkle the patient's skin in the appropriate oriental face diagnosis region instead of the patient manipulating his own facial muscles to accomplish this. This second way is less desirable but useful when the patient has poor facial control.

Once the area is activated (wrinkled) test the associated muscle (i.e. PMS muscle test with an activated liver diagnosis area (glabella). If inhibition of the muscle test occurs, check for which factors of the IVF negate the inhibition and more importantly, check if the emotional neurovasculars negate the inhibition. Also check for needed nutrition or flower remedies before making any corrections then treat the appropriate factors of the IVF and/or the emotional neurovasculars and reassess.

Conclusion

The use of oriental face diagnosis has become another valuable tool to find hidden weakness especially those of an emotional nature.

FLOWCHART



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Face-Organ Correlations

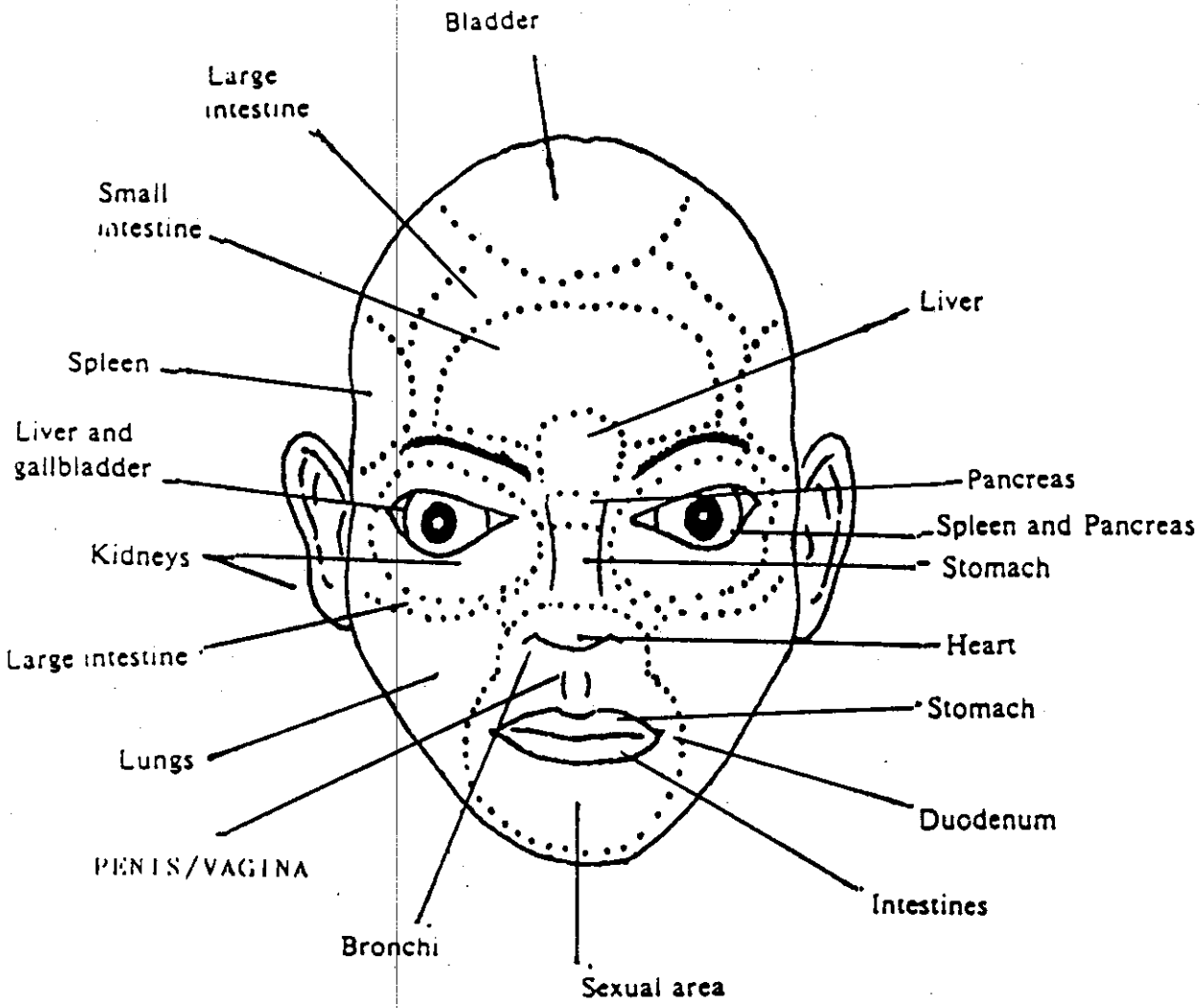


DIAGRAM RE-DRAWN FROM SEMINAR NOTES OF THE INTERNATIONAL ACADEMY OF CLINICAL ACCUPUNCTURE

Hidden Adrenal Weakness and the Pupillary Reaction to Light

Craig S. Rubenstein, D.C.

Abstract

The use of the pupillary light reaction when combined with applied kinesiology manual muscle testing as a useful tool to help find hidden adrenal weakness as well as a treatment procedure will be discussed.

Introduction

This author has found that the pupillary light reaction as described in Synopsis (1) can be used as another method of finding hidden adrenal weakness when coupled with standard muscle testing procedures.

Discussion

The indication of possible adrenal weakness in the presence of an inappropriate pupillary reaction to constant bright light stimulation can be useful in treating the patient who appears to have the signs and symptons of adrenal fatigue but muscle testing does not confirm your suspicions.

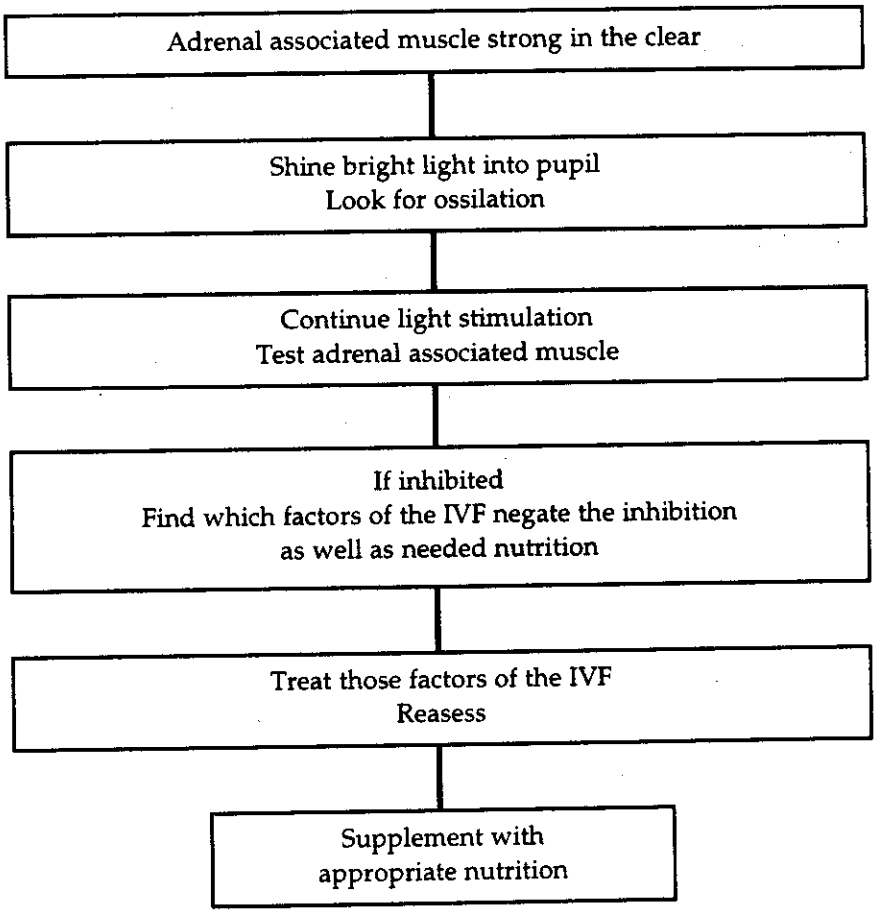
Procedure

With the patient supine, stimulate the pupils individually and look for oscillation of the pupil during prolonged bright light stimulation. If oscillation is noted, at this point, test a previously strong sartorious or posterior tibialis muscle for inhibition. The muscle test must be done with continued light stimulation to the pupil. In order to accomplish this, have the patient hold the light source. If inhibition is noted, have the patient therapy localize to all factors of the IVF for strengthening of the inhibited muscle. Before performing any treatment, check for any nutritional support that may be needed as well as whether therapy localization to the emotional neurovasculars strengthen the inhibited muscle(s). Treat as indicated by your examination and reasess. During treatment constant light stimulation is unnecessary.

Conclusion

The use of standard examination procedures such as the pupillary light reaction, along with standard muscle testing techniques, is another example of how applied kinesiology can be used as a functional, neurological examination.

FLOWCHART



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DIVISION II - CRITICAL REVIEW PAPERS

THORACOLUMBAR FIXATIONS DURING PREGNANCY CONTRIBUTING TO LOWER BACK PAIN-

A Chiropractic Study of 25 Cases

Victoria C. Arcadi, B.A., D.C.

ABSTRACT

Thoracolumbar pain is a very common and severe discomfort during pregnancy especially during the second and third trimesters. In this study, twenty-five women with gestation of 25 weeks to 40 weeks were treated for thoracolumbar fixations as their primary complaint, and lower back pain as a secondary complaint. In all cases, the thoracolumbar fixation was found and treated with chiropractic adjustments, which resulted in relief of their lower back pain.

INTRODUCTION

Chiropractic has been found to be very beneficial in the treatment of the most common complaint in pregnancy, lower back pain.(1) During the latter parts of the second and third trimester of pregnancy, a tremendous change occurs in the pregnant woman's posture. With the fetus growing inside the uterus, the abdomen becomes more and more pendulous. The lumbar spine becomes extremely lordotic, helping to support the weight of the baby. As the woman leans backwards at the shoulders to try to support herself, the thoracolumbar spine, which is the transitional area of the spine becomes more and more compensated to the point that a fixation occurs involving three or more vertebrae, from T11-L2.

From the clinical experience of this author in over a decade of treating pregnant women, not only does this area of the spine become fixed, but it puts an added stress on the muscles of the lower back, especially the gluteus muscles, piriformis, and rectus femoris. Studies by Willard (2) have shown that the multifidus muscle which has its biggest role in motion of the sacrum, disappears into the thoracolumbar fascia. The thoracolumbar fascia firmly attaches to the supraspinous ligament which adheres to the interspinous ligament. From this the gluteus maximus muscle attaches to it and forms a raphe of fascia fibers which separates it. It continues as part of the sacrotuberous ligament. Vleeming et al.(3) found that the sacrotuberous ligament directly attaches to the piriformis and the rectus femoris. By this finding Vleeming et al. found that the thoracolumbar fascia also functions in the load transfer from the spine to the legs. And once the thoracolumbar area has been adjusted with chiropractic procedures, the pain in the thoracolumbar area as well as the lower back pain is relieved.

The purpose of this study is to describe how the resolution and management of thoracolumbar fixations in pregnancy with chiropractic adjustments also relieves lower back pain. An attempt will also be made to describe the muscular relationships affected as a result of chiropractic care.

METHODS

All 25 women were evaluated for thoracolumbar pain (TLP) of a severe nature. Most of these women could not sleep, and generally their pain was constant. There was in some cases radiation along the lower ribs bilaterally. Concomitant with the TLP was some degree of lower back pain which was present in all cases and was a secondary symptom.

A thorough examination including orthopedic, postural, and muscle testing was performed. The pain was localized in the thoracolumbar spine. The pain was constant in nature and worse upon standing, with not much relief in any position. Motion of the spine was restricted to palpation. Lower back pain was also present, described as an achy feeling across the L5/S1 area generalized in nature, all across the lower back. There was no evidence of sciatic neuritis, or disc herniation. Ambulation was within normal limits for pregnancy. In the last trimester there was evidence of a waddling gait, due to the tremendous relaxation of the ligaments and secretion of relaxin hormone.

Muscle tests were performed using Applied Kinesiology procedures.(4) The muscles found weak were; Psoas, unilateral or bilateral, Gluteus Maximus, unilateral or bilateral, Piriformis, unilateral or bilateral, and bilaterally weak Lower Trapezius (which indicates according to AK protocols, Thoracolumbar Fixation complex.(4)

Treatment consisted of chiropractic adjustments to the T12-L1 area of fixation. Adjustments were made using Diversified technique to free the fixation, adjusted posterior to anterior as described in the Applied Kinesiology procedure guidelines and protocols for fixations.

All weak muscles were strengthened using neurolymphatic reflex stimulation described in basic Applied Kinesiology procedures and protocols.

Results

In all cases women treated in this study were completely relieved of TLP, and had experienced some degree of relief of lower back pain. All 25 women in this study were treated at a frequency of one to two times per week for approximately two weeks then once a week for the next three weeks. All pain associated with the thoracolumbar spine had been eliminated and lower back pain was about 75 - 80% relieved in each case in the study.

In all cases the TLP was 90-100% relieved after the first correction of the fixation. There was a residual soreness which persisted about an hour following the first adjustment.

Conclusions

The vast majority of pregnant women all over the world share the discomforts associated with pregnancy. The most common is lower back pain. One of the other discomforts commonly shared amongst pregnant women is TLP. This study shows a direct physiological and anatomical relationship with the thoracolumbar area and the lower back, and with chiropractic treatment and adjustments, the TLP as well as lower back pain was relieved in these 25 women.

As we know there is no medical treatment for these women. They are told to suffer until delivery at which time the pains will resolve due to delivery of their baby. Chiropractic has been shown to be a safe and effective treatment choice for pregnant women. Furthermore, the treatment regime is very conservative and cost effective, as well as consistently beneficial in a very high percentage of cases.

The time has come to offer help and relief to pregnant women through the chiropractic approach, which uses no drugs or surgery. Pregnant women can experience relief from the discomforts associated with pregnancy, thereby improving the outcomes of the mother and the fetus.

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"Hidden" Occipital Subluxations

Alan Berman, D.C.

Abstract

This paper describes the diagnosis and treatment of "hidden" occipital subluxations.

Introduction

Following Dr. Goodheart's admonition to "Start with the structure," it is always important that we not miss significant subluxations of the spine due to the body's ability to adapt. Occipital subluxations have very significant neurological effects and when present should be adequately reduced before making judgments regarding functional integrity of the muscular, acupuncture or visceral systems.

Frequently the patient presents the "classic" swollen and painful occipital nodule or fiber associated with occipital subluxations and fixations in A.K., but the occipital problem can not be found using traditional challenges for occipital subluxation, fixation, rocker mechanism, PRYT, etc.

Discussion

The diagnosis and treatment of "hidden" occipital subluxations is as follows.

Technique

1. Supine patient therapy localizes (T.L.'s) the Occiput-C1 area with no change in a strong indicator muscle.

Patient without TL puts head into extension with no change in a strong indicator muscle. This is the same as the extension challenge in the rocker motion involvement in standard A.K.(1) This is not the extension phase of PRYT (Pitch, Roll, Yaw, Tilt) technique, as the patient's legs remain straight and not placed off the table putting the pelvis into extension.

A positive challenge is elicited when patient TL's Occiput-C1 area while head is in extension causing weakening of the previously strong indicator muscle.

The patient returns from cervical extension and releases the TL.

Challenge is made for Occipital subluxation using lateral tongue protrusion. This is standard A.K. challenge for Occipital subluxation.(2) This challenge will be negative.

Test for sphenobasilar inspiration assist cranial fault. (3) This is the standard A.K. challenge. Have the patient inspire then do a forced exhalation, causing weakening of a strong indicator muscle. Correct this cranial fault by applying pressure on mastoid process and palatomaxillary suture on deep inhalation in the direction of the appropriate vector as found by challenge. Repeat 4 - 5x. Re-challenge on forced expiration to verify correction.

Re-challenge for occipital subluxation either with TL to Occiput-C1 or tongue lateralization. Challenge will now be positive. Challenge for contact point and vector and adjust accordingly.

Challenge and adjust sacrum for Lovett reactor associated subluxation.

Discussion

Besides the obvious value of finding "hidden" occipital subluxations, the other value of this protocol is a reduction in tension of the spinal column en masse, the cervical column in particular. If you attempt to adjust the cervical spine before and after performing this protocol, the reduction of spinal resistance to the therapeutic thrust is rather obvious. Once the occiput subluxation is corrected the "tight" cervical column opens up nicely, sometimes self-correcting previously found subluxations, or at the minimum making other cervical correction much easier. Remember, frequently this occiput pattern has concurrent anterior cervical subluxations, often unilateral. Attempts at adjusting for posteriority may be met with less than satisfactory results.

There is one limitation to report regarding these findings. In rare instances, the presence of a T12 subluxation pattern will prevent the occipital subluxation from challenging even after the sphenobasilar correction. I will present my findings on T12 subluxation patterns in a separate paper. In any case, if this occurs look at T12 for anterior, posterior, or inferior subluxation. If found, correct it and then the occipital subluxation will show up.

CONCLUSIONS

I have found this protocol very helpful over the past three years, and I include it as part of my initial screening along with PRYT. These patients frequently present with other subluxations that are difficult to adjust, until the occiput subluxation is reduced. This protocol is particularly useful when patients have come from other practitioners who attempted significant P-A or rotational thrusting into an already hyperlodic or fixated cervical column.

SUMMARY OF PROCEDURES

1. Patient TL's Occiput-C1 >indicator muscle stays strong.

2. Cervical extension >indicator muscle stays strong.

3. Patient TL's Occiput-C1 while in cervical extension>indicator muscle weakens.

4. Patient releases TL and returns to neutral cervical position.

5. Patient laterally protrudes tongue>indicator muscle stays strong.

6. Patient performs a forced exhalation>indicator muscle weakens.
   Correct sphenobasilar inspiration assist cranial fault.
   Patient performs a forced exhalation>indicator muscle stays strong.

7. Patient laterally protrudes tongue>indicator muscle weakens.
   Adjust occipital subluxation.
   Patient laterally protrudes tongue>indicator muscle stays strong.

8. Patient TL's Occiput-C1>indicator muscle stays strong.

9. Challenge and adjust sacrum for Lovett reactor associated subluxation.

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SURROGATE TESTING

Its History, Controversy and Recommended Uses

Hans W. Boenke, D.C., DIBAK

ABSTRACT

Surrogate testing is a procedure which utilizes manual muscle testing to help in the diagnosis of some disorder or lesion in a patient. The uniqueness of this method is that the patient being examined, person number one, is passive with regard to the actual test but is in physical contact with the second person, the surrogate. The lesion is either touched by the surrogate or by the patient and a previously intact indicator muscle of the surrogate is tested for a change in function. In some cases the patient is subjected to a physical, chemical, or mental challenge and a previously intact indicator muscle of the surrogate is tested for a change in function. The purpose of this paper is to survey the current literature on surrogate testing and draw conclusions on its utility for practitioners of applied kinesiology.

Surrogate testing is a controversial procedure used in chiropractic and other health professions. Dr. George Goodheart discovered surrogate testing serendipitously while examining and treating a mother and her child. When Dr. Goodheart was done working with the child, the mother of the child asked Dr. Goodheart to examine her shoulder. During the examination he found certain muscle imbalances in the mother but was interrupted by a number of phone calls. On returning each time he began examining the mother again. He noticed that some muscle imbalances had changed but only when she was holding her child. This seemed interesting so he had an associate doctor reproduce the results to confirm his findings. He attributed the conflicting findings to a form of energy transfer between the mother and child. Dr. Goodheart referred this to a parallel study in which a similar phenomenon appeared to occur. An Australian publication showed that similar electroencephalographic tracings occurred from nursing mothers and their breast fed children. The children were kept in a nursery forty feet down the hall from the mothers. The electroencephalographic tracings of the mother and her child would demonstrate similar spiking at exactly the same time when the sleeping mother demonstrated rapid eye movements (REM activity). This history on the discovery of surrogate testing was reported by McCord.(1)

In 1985 Sprieser (2,3) hypothesized that surrogate testing occurred as a result of cellular resonance. He purported that a specific resonance or vibratory pattern could be seen in almost every area and cell of the body. Each part could emit a specific resonance frequency that would be similar for all humans. The lesioned area could have a different resonance frequency which could be compared by the body by means of a Fourier Transform to the usual frequency. The discrepancy could be interpreted by the body of the surrogate as a facilitation or inhibition of the surrogate's indicator muscle. To support his theory he quoted a 1936 theory of Dr. Paul Weiss (4) of "selectivity in fiber connection (Radio Broadcast Model) based on resonance effects involving diffuse morphological interconnection with impulses specificity and selective neuronal and end organ attunement." The resonance principle worked like a radio pick-up and provided a selective response in the presence of diffuse non-selective synaptic connection. Sprieser gave an example of the resonance theory of sound; a goblet shattering when a violin was played at the right frequency. He described the ability of the human ear to differentiate sounds as a result of the three dimensional nature of sound. He then described the eye's response to colour, the taste buds' to taste, the olfactory system to smell and the skin to various types of stimuli. He quoted Bern, 1983 (5) that "all the evi-

dence shown for touch kinesthesia sensory feedback shows there is a specificity to particular signals." He also stated that muscles were found to respond to specific electrical stimuli that corresponded to that specific muscle's length. He concluded that the similarity in resonant pattern could be recognized by the surrogate's nervous system allowing a similar response to testing the patient directly.

Reliability of Surrogate Testing

There have been two attempts at measuring the reliability of this procedure. In 1990, Zvirblis (6) used five surrogates to test a sample of fifty patients on whom a therapy localization to the C7-T1 area caused a gamma II weakness in the right hamstring of a prone patient. He claimed that "all five surrogates yielded 100% gamma II muscle weakness, regardless of sex and age of the patient." He then concluded that "gamma II muscle problems apparently are better transmitted than gamma I." His use of gamma II muscle testing is questionable. Schmitt, a chiropractic neurologist, (7) has hypothesized that gamma I and gamma II pathways could explain results found using manual muscle testing. He also has related gamma II weakness to upper motorneuron problems. Zvirblis, by having the patient therapy localize C7-T1 resulting in a gamma II weakness, was in effect indicating that a lower motorneuron problem was causing an upper motorneuron problem. This does not make sense given the hierarchy of the nervous system. It has always been my understanding that the gamma II weakness is a true muscle weakness existing before therapy localization. What he was measuring could have involved a second variable. Secondly, it is difficult to accept 100% results on 250 tests. Very rarely can any procedure perform 100% of the time over a large number of tests.

In 1989 Corneal (8) reported a study in which two doctors and three surrogates were used to evaluate surrogate testing. The doctors compared direct testing with surrogate testing. Dr. A used two surrogates. Surrogate number one was used to test eight patients and surrogate number two to test five patients. The results revealed 100% accuracy for surrogate number one and 64% accuracy for surrogate number two. Dr. B used one surrogate who we will refer to as surrogate number three. Dr. B tested nine patients in his part of the study. The results revealed 58% accuracy. Corneal concluded that his test sample lacked reliability. In two of the three surrogates, results were only slightly better than chance. The fact that one surrogate was 100% accurate, indicated that certain surrogates may be more reliable than others. He also pointed out that an inaccurate response could be changed by a reversal of palm up, or palm down therapy localization.

Controversy with Surrogate Testing

Surrogate testing has been the source of some controversy in applied kinesiology. I will use a personal anecdote to illustrate this. At a technique forum in Calgary, Alberta, Canada, April 24-25, 1993, three techniques were presented. My presentation (9) was on applied kinesiology. There were times when all three presenters were on a panel, with a moderator asking questions. The moderator, a prominent chiropractic researcher, directed a very provocative question to me on the topic of surrogate testing. The fact that he chose to ask that question in front of a large audience rather than in private was an indication of its potential for controversy. There have been other instances where the media have focused some of their attention on this procedure when presenting a documentary program designed to create controversy.

Rating of Surrogate Testing

Walther (10) in his text, emphasized that therapy localization (a diagnostic method frequently used with surrogate testing) should only be done by the patient contacting the area in question. He states "another individual touching the area for therapy localization introduces variables that are difficult, if not impossible to evaluate". He indicated that these variables could be readily observed by having several individuals therapy localize the same area on another individual. This indicates that he does not consider it a very reliable procedure. He proposed that individuals with high energy levels could add energy to the area tested while those with low energy could subtract energy from the area tested and also that the additional variables could cause errors in interpretation and thus, he recommended not using the procedure. He did not

specifically use the term `surrogate testing' but described the method as mentioned above.

Due to the controversy associated with this procedure, Walther put forth a motion to the ICAK-USA board to make a policy statement including surrogate testing. The following is a correspondence presented by Dr. Weinstein (11), to the ICAK-USA board, with the results of an affirmative vote dated May 25, 1995.

The policy statement on surrogate testing by ICAK-USA is as follows: "Surrogate testing is not a usual method of diagnosis in applied kinesiology. It is used only when the subject can not respond appropriately, such as with a comatose individual, an infant, or with an otherwise incapacitated person. In those cases surrogate testing should be done only with oral or written informed consent, and that it be included in the patient's record and performed in conjunction with the appropriate standard diagnostic tests necessary to determine the indications for therapy." The policy also indicates that the proper use of applied kinesiology is by licensed primary health care providers. It emphasizes the necessity to have standard diagnostic background to properly put applied kinesiology findings into perspective and that these be applied according to the laws and regulations applicable to the doctor's license to practice.

Description of Surrogate Testing

Dr. Goodheart first wrote about surrogate testing in 1974 (12). He indicated that the use of therapy localization could be done with infants and small children using their mothers and with older individuals, such as those comatose or following a stroke, using another individual of the same sex. A hand hold contact was needed and the patient could be tested using a second individual to determine a muscle response. He referred to it as an energy transfer technique. He also emphasized that the surrogate be evaluated and have any weaknesses corrected prior to the use of the procedure.

Sprieser (13,14) described three methods of application of the procedure. They are as follows:

1) Find a stable muscle on the surrogate; have the surrogate contact the area in question and retest the surrogate's muscle.

2) The surrogate contacts a non-lesioned area; the patient therapy localizes the area in question and the previously stable muscle of the surrogate is retested.

3) The patient contacts the surrogate's body at a convenient location so that the surrogate can be tested.

The Use of Surrogate Testing

Three papers discuss the use of surrogate testing. In 1977, Saks (15) presented a single case study of an eight month old girl who he evaluated by means of surrogate testing of her mother. He treated her over a six month period to correct a foot which was turned 90 degrees to the normal posture. As the treatment progressed, she began to walk and place her leg and foot in the normal position with improved balance and weight bearing.

In 1981 a veterinarian, Tiekert (16), described the use of a surrogate staff member in his office to locate by therapy localization, lesioned areas in various animals. He used a test of the surrogate's anterior serratus muscle; however, he did not describe an accurate testing procedure. He did mention occasionally finding some positive tests, for which he could find no lesion by standard means. He did not try to explain this phenomenon, but referred to finding areas of decreased energy.

In 1982 Cousineau (17) recommended that the doctor not use the palmar aspect of the fingers when muscle testing a patient. He felt that when the doctor had meridian imbalances, the use of the palmar aspect of the fingers for testing would in effect cause surrogate testing of the doctor. He then described a method he used of testing himself while using the patient as a surrogate. He suggested that doctors examine and treat themselves using this method. I feel however, this rather interesting use of the procedure introduces many variables, that as Walther stated earlier "are difficult, if not impossible to evaluate." In this case some of the possible variables are; the health status of the surrogate, the mindset of the doctor who is in effect examining himself, the mindset of the patient, the variation in the doctor's posture during testing, the doctor's respiration, and the doctor's facial expression, etc. These would all be difficult to

evaluate while trying to objectively test an intact muscle on someone else.

Recommendations on the Use of Surrogate Testing

In January, 1996, I spoke with Dr. Goodheart regarding surrogate testing (18). He indicated that his position was the following:

a) It is a much overused procedure.
b) He himself has found occasion to use it about once in three years.
c) It should only be used on individuals that cannot be tested in any other way, such as comatose individuals or infants.
d) It should be done only after obtaining informed consent in writing after explaining it to the patient.
e) He called it experimental.

Stoner (19) indicated that in cases where the doctor's ability to adequately test muscles was constrained, in the very young, the very old, or those in acute pain, through transference, a second person could be used to therapy localize the patient. He specified that the second person be examined and treated to eliminate all gross structural faults before being used. He described a palmar contact of the second person on the suspected area of involvement of the patient, while testing an intact muscle on the second person. He also described the use of challenge testing using the second person. He emphasized that only weakness would transfer from the patient to the second person. He also indicated that the transference was most effective between two people of the same sex and those closely empathically related.

McCord (20) indicated that the following factors were important with regard to surrogate testing:

a) The doctor should be healthy.
b) The surrogate should be in good health.
c) The surrogate testing should not be used unless it is impossible to test otherwise.
d) One should first test to ensure that the surrogate's muscle is strong.
e) When a positive therapy localization is present, have the patient therapy localize a related reflex area and if positive, treat it and retest.
f) A surrogate with just a casual relationship with the patient can rarely be used.
g) The doctor will cause an adverse response up to 1% of the time.

Informed Consent and Surrogate Testing

In April 1995, Walther (21) described the historical change in consent for treatment, from implied consent, to informed consent. He also described the two legal standards used to evaluate informed consent; "The physician" or "professional standard" which is generally more forgiving of the doctor, and the now more accepted "patient standard." The patient standard, places the burden on the physician to supply the information that a reasonable patient needs to make an intelligent choice. He described the process of obtaining informed consent and its importance. He made special mention of surrogate testing. He recommended that it only be used when no other method of examination is available, such as with infants. He emphasized that surrogate testing should never be used without informed consent. He mentioned the importance of giving to the patient, parent, or guardian, specific information; that surrogate testing is a research method, used only in conjunction with other standard diagnostic methods.

DISCUSSION

With the current emphasis on the development of guidelines for various professions, it seems appropriate to draw conclusions and set a policy or set of guidelines for the use of various procedures, especially when they are subject to controversy. I recommend that a general set of procedural ratings be established for all chapters of the International College of Applied Kinesiology (ICAK). Based on these ratings, procedures can be evaluated as needed and policies formed with regard to their use, should the need arise. If ICAK has a clear picture on the use of procedures, such as surrogate testing, it will give practitioners of applied kinesiology added protection. The policies, provided they are followed, show that the practitioner practices in a responsible manner which is recognized and practiced by numbers of other practitioners. This would certainly be of importance to any practitioner who finds him or herself in a legal situation in which the use of a procedure is questioned.

CONCLUSIONS

Based on the information presented in this paper, I would recommend the following or similar procedural ratings be adopted for all chapters of ICAK. These ratings are a modified form of those used in the clinical guidelines for chiropractic practice in Canada.(22) They are modified to reflect the special needs of practitioners of applied kinesiology. These ratings can be used now to evaluate surrogate testing and when the need arises they will be useful in evaluating other procedures.

Procedural Ratings (ICAK-Canada)

Established: Accepted as appropriate by the practicing practitioners of applied kinesiology for the given indications in the specified patient population.

Promising: Provisional acceptance as it appears to be appropriate for the given indication in the specified patient population.

Equivocal: Caution is recommended for general application although current knowledge appears to support a given indication in a specified patient population. The value cannot be confirmed or denied.

Investigational: Use for a given indication in a specified patient population should be confined to research protocols. Evidence is insufficient to determine appropriateness.

Doubtful: This appears inappropriate for the given indication in the specified patient population at this time.

Inappropriate: Regarded by the majority of Certified Teaching Diplomates of applied kinesiology as being unacceptable for the given indication in the specified patient population.

Note: These ratings are subject to change if warranted by new evidence.

Futhermore, I propose the following ratings for the procedure known as surrogate testing:

Surrogate testing is considered to be a procedure which for the general patient population as given below, is rated investigational. For a specified patient population it is rated as equivocal.

The specified patient population is:

1) Infants or small children who cannot be tested by use of manual muscle testing and for whom all other means of investigation available to the practitioner of applied kinesiology have been utilized.

2) Unconscious or neurologically compromised individuals for whom all other means of investigation available to the practitioner of applied kinesiology have been utilized. This would include but not be limited to stroke victims and those with advanced neurological conditions.

The procedural ratings are attached on a separate sheet but for the sake of clarity the two ratings mentioned above are defined below in the order of their presentation above.

Investigational: Use for a given indication in a specified patient population should be confined to research protocols. Evidence is insufficient to determine appropriateness.

Equivocal: Caution is recommended for general application although current knowledge appears to support a given indication in a specified patient population. The value cannot be confirmed or denied.

The use of surrogate testing in general clinical application is discouraged with the exceptions listed above for the specified patient population. In those special cases the results should be interpreted very cautiously, being used only as an added confirmation of other findings rather than as reliable findings themselves.

In the special (usually rare) instance that the clinician chooses to use the procedure, the following suggestions are strongly recommended.

1) That the clinician be in good health.

2) That all other available procedures for diagnosis available to the clinician be done first.

3) That the procedure be done by the clinician himself or herself rather than a support individual.

4) That the procedure be limited to infants, very small children who cannot be muscle tested on their own, or to comatose or neurologically disabled individuals who cannot be tested on their own by any other method to evaluate the suspected problem(s).

5) That the individual used as the surrogate be examined and all major structural problems corrected such that the muscle or muscles used on the surrogate can be relied on to be intact.

6) That the results be interpreted very cautiously with the weight of evidence in favour of any other more objective findings and as a confirmation of those.

7) That the clinician explain the status of this procedure and obtain informed consent by the patient, their parent(s) or guardian as the case may be before proceeding.

The following is suggested as a possible consent form. It is recommended that your legal advisor check the wording to see if he or she sees the need for any modification in the wording. Laws can vary from province to province.

INFORMED CONSENT FORM

I, Mr__ Ms__ Mrs__ understand that Dr._____ will be using a procedure referred to as surrogate testing to assist in the examination and the formulation of a diagnosis related to_____. I understand that the procedure is experimental and is rated equivocal and will be used only to corroborate (confirm) other findings. I accept and approve of the use of this procedure at this time.

Patient, Parent or Guardian_____
Signature

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Note: References #4 and 5 are Dr. Sprieser's and not my own. I have included them only because they may help to explain his hypothesis.

TOTAL ENZYME

John W. Brimhall, D.C.

ABSTRACT

Enzymes are the staff of life. To accomplish some of the metabolic processes that take place in our body without enzymes, the temperature would burn us up. Minerals, vitamins and hormones need enzymes present for them to function properly.

INTRODUCTION

I became interested in finding enzymes that could be used for digestion, athletic injuries, mobilization of sticky blood on dark-field live blood examination and they needed to work at wide ranges of pH. The plant enzymes meet all of these criteria.

DISCUSSION

William Donald Kelley in his book, "One Answer For Cancer," wrote, "if you want to buy cancer insurance don't buy an insurance policy, buy enzymes."

Years ago, I referred patients for cytotoxic testing. Different foods were introduced into a persons blood and viewed. If a person was allergic or sensitive to a food, the blood cells would explode. I found many patients to be allergic or sensitive to many different foods. What seemed especially important to me, however, is that they would introduce enzymes into the persons blood and then re-test the number of sensitivities. Routinely half of the reactions were gone.

Dr. Edward Howell as a young physician became so sick that he had to discontinue medical practice. He was examined by Mayo's, etc. to no avail. As a last resort, he wound up in a naturopath's office, who put him on raw foods. Dr. Howell returned to complete and vibrant health. He then asked the naturopath what happened? It was explained that the American diet is now devoid of the enzymes that we so critically need. Vitamins, minerals and fiber are non functional without enzymes. Enzymes are the most vulnerable to processing and heating.

Enzymes are needed for every chemical action and reaction. The metabolic enzymes are the factors that mobilize our organs, tissues and cells. Hormones, vitamins and minerals are enzyme dependent to work properly.

Enzymes are stated to be a protein molecule that has a specific function in the body from digesting food to repairing muscles, bone and digestion. Assimilation as well as detoxification are dependent on enzymes. Cooking, microwaving, etc. destroys many of the enzymes in food.

There is not a process in the body that is not enzyme dependent. Life is impossible without enzymes.

B.J. Palmer looked for the best adjustment in the world and called it the hole in one. If there were to be a whole in one nutrition, I think it would have to be enzymes. Almost every patient and people who don't want to become patients need enzymes.

Dr. Howell spent the rest of his life developing, testing and utilizing enzymes. He developed a plant based enzyme that contains, Amylase, Lipase, Cellulase, Invertase, Lactase, Maltase and Diatase.

All raw food naturally contains the proper types and proportion of enzymes necessary to digest itself, whether in human consumption or in the eventual decomposition in the natural world. When raw food is eaten, chewing ruptures the cell membranes and releases the indigenous food enzymes to begin the selective breakdown of substrates. Proteases break long protein chains (polypeptides) into smaller amino acid chains and eventually into single amino acids. Amylases reduce large carbohydrates (starches

and other polysaccharides) to disaccharides including sucrose, lactose, and maltose. Lipases digest fats (triglycerides) into free fatty acids and glycerol. Cellulases (not found in the human system) break the bonds found in fiber matrices which envelope most of the nutrients in plants, cellulase increases the nutritional value of fruits and vegetables.

Overwhelming evidence shows that food enzymes play an important role in digestion by predigesting food in the upper stomach before hydrochloric acid has even been secreted. Supplementation of food enzymes is necessary in today's society due to the prevalence of cooked and/or processed foods. Food enzymes are essentially destroyed at 118° Fahrenheit; thus most modern methods of food preparation leave food devoid of digestive enzyme activity. Placing the full digestive burden on the body, the digestive process becomes over-stressed and vital nutrients are not released from food for assimilation.

Unlike supplemental enzymes of animal origin, plant enzymes work at a much wider pH range. Food sits in the upper portion of the stomach for as long as an hour before gastric secretions begin action. Several studies conducted at major universities have shown that the enzymes in saliva continue their digestive activity in the upper stomach and can digest up to 30% of the ingested protein, 60% of ingested starch and 10% of ingested fat during the 30 to 60 minutes after consumption. Although salivary enzymes accomplish significant amount of digestion, their activity is limited to a pH level above 5.0. Exogenous plant enzymes are active in the pH range of 3.0 to 9.0 and can facilitate the utilization of a much larger amount of protein, carbohydrates and fat before HCL is secreted in sufficient amounts to neutralize their activity. Obviously, plant enzymes can play a significant role in improving food nutrient utilization.

In addition to protease, amylase, lipase, and cellulase, the formula we use provides a concentrated source of the disaccharidases lactase and invertase. Disaccharide intolerance occurs when insufficient levels of disaccharidase enzymes are secreted in the small intestine causing malabsorption and physical discomfort. Lactase deficiency is the common and well-known form of carbohydrate intolerance. Lactase digests lactose (milk sugar) into glucose and galactose. Most mammals, including humans, have high intestinal Lactase activity at birth. But, in some cases, this activity declines to low levels during childhood and remains low in adulthood. The low lactase levels cause maldigestion of milk and other foods containing lactose. It is estimated that approximately 70% of the world's population is deficient in intestinal lactase which more than one-third of the U.S. population presumed to be unable to digest dairy products. Supplemental lactase has been found to decrease the symptoms of lactose intolerance associated with the consumption of dairy foods. Invertase is another disaccharidase that works to break down sucrose (refined table sugar) into glucose and fructose. The prevalence of processed and highly refined foods in the American diet means that we consume a great amount of this sugar which can contribute to undue digestive stress. It is theorized that unrecognized sucrose intolerance is a contributing factor in many allergies. Supplemental Invertase can increase the assimilation and utilization of this sugar. The additional supplementation of the carbohydrates (Malt Diastase assures the breakdown of starch into maltose and then into glucose molecules, allowing greater absorption of this energy-giving sugar. Inclusion of these sugar-breaking enzymes gives this formula a broad base for improving nutrition.

The real proof of the plant enzyme effectiveness came when I saw it on Darkfield microscope. We viewed a persons blood with erythrocyte aggregation, indicating lack of protein digestion. We saw undigested fats, and other tail-tail signs of poor digestion. We then gave the person the plant enzymes and re-tested their blood in ten minutes. The red blood cells were then flowing freely and the fat showed to be completely digested with the blood overall looking much more normal. We have now tested thousands with darkfield and have seen changes beyond any expectation.

With these new plant enzymes that have been developed, the rule's have changed. We are seeing spectacular changes in the blood within a matter of minutes. I find these plant enzymes to be superior to any digestive aid that I have ever seen or used in the past.

SUMMARY

Plant enzymes have helped us in patient care from digestive complaints to sticky red blood cells on darkfield examination. We have found them to test well with kinesiology. We have used them successively from infants with colic to the aged with gas and bloating.

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TOTAL PROBIOTIC

John W. Brimhall, D.C.

ABSTRACT

Acidophilis is carried in every health food store and most any nutrition conscious doctor's office. This probiotic has helped many people with digestive complaints and diarrhea. Bifidus has also found its way into the literature and is getting near equal time as a helpful friendly bacteria. This paper will discuss the need and use of other synergistic probiotics as well.

INTRODUCTION

Isolation and preservation of acidophilus was a great aid to the humans G.I. tract due to the massive use of antibiotics that were destroying all of our natural bacteria. Current research has isolated over 400 friendly bacteria that can be represented with seven or eight strains that are supposed to be in the colon. They have been found to be even more effective if accompanied by fructooligosaccarides to give them a good start in the intestines. It has taken real advanced technologies to have them exist together in capsule form and not to even have to be refrigerated.

DISCUSSION

Current dietary habits, wrong food combinations, excessive use of sweets and other refined carbohydrates and indiscriminate use of antibiotics have yielded many complications to our health. The sad note is that 50% of all antibiotics sold are used in the raising of animals for slaughter. They say this gives the animals a faster weight gain with less infections. What it gives us is death of our normal intestinal bacteria when we eat meat. This yields us symptoms of gas, indigestion, bloating, yeast overgrowth, etc.

It is estimated there are more numbers of non human cells in our body than human cells because of all of these probiotic substances. Billions of beneficial micro organisms are suppose to live in our intestinal track which keep the intestines clean by feeding on the putrefaction, waste, fungi, yeast and other harmful bacteria. These beneficial micro organisms also aid the body in producing the essential elements such as hormones, vitamins and proteins that are needed to run our body. Most people are aware of lactobacillus acidophilus, and some companies have sold them separately. In recent years they have achieved the stabilization of bifidus bacteria. Great work has been done in the last few years on lactobacillus salivarius which has shown to be very useful in multiple situations.

What has been missing until recently is the technology to put many of the friendly bacteria in one product to give the body the ability to utilize all of the necessary flora. These are needed to replenish the depletion that has been caused for the afore mentioned reasons. A probiotic blend has now been developed to give several different probiotic substances to enable better and more complete re-inoculation of the bodies normal bacteria.

Research is showing that each of these cultures attach at different sights in the intestines and can live synergestically together. Below is a list of the eight different bacteria along with their indications for use:

Lactobacillus acidophilus is known to thwart the growth of pathogenic microorganisms, including Candida albicans, by producing both lactic acid and antibiotic compounds. This probiotic also helps minimize the symptoms of dairy intolerance.

Bifidobacteria (B, bifidus and B, Ongums) also inhibit the growth of pathogenic organisms, in particular, research shows that nitrite-producing organisms are specifically inhibited by this probiotic.

Enterococcus faecium is a highly stable microorganism that withstands adverse conditions such as acidity, temperature, salt and drying. Studies show this probiotic to be highly resistant to tetracycline and chloramphenicol antibiotics.

Lactobacillus plantarum produces a high percentage of lactic acid which acts to inhibit harmful microorganisms.

Lactobacillus salivarius has been shown to produce alpha-galactosidase which can help reduce flatulence. In addition, L. salvarius has been shown to be highly resistant to tetracycline and chloramphenicol antibiotics.

Lactobacillus Rueleri has been shown to stabilize the intestinal flora and is used with L. acidophilus and bifidobacteria as extra support. L. rueleri promotes additional benefits such as protection against pathogens, provision of certain nutrients and enzymatic reactions, involvement in tissue morphogenesis/peristalsis activity and interaction with the immune and endocrine systems.

Lactobacillus Casei creates a desirable microbial balance and controls the production of toxins upon vital organs and body cells. L. casei contributes to intestinal peristaltism and elimination of harmful amines from amino acids. L. casei coats the intestinal mucosa and protects against invasion and activities of harmful organisms. L. casei provides constant protection in the digestive tract to promote better nutrition and health.

A full complement of hydrolytic food enzymes has been added to some of these formulas, providing Protease, Amylase, Lipase and Cellulase, with synergistic mineral co-factors help assure the breakdown and assimilation of nutrients. These formulas also may contain Jerusalem Artichoke, Rose Hips and Acerola.

The Jerusalem Artichoke is a rich source of fructooligosaccharides. Fructooligosaccharides are not metabolized by the human body and pass into the intestines where they are metabolized by Bifidobacteria. The benefits of fructooligosaccharides are multiplied. Sometimes Acerola and Rose Hips are used to provide an all-natural source of vitamin C and antioxidant bioflavinoids. Although poorly understood, a definite interaction exists between vitamin C and the immune function. Controlled studies show that in the course of infectious disease, the level of vitamin C in the system decreases significantly while very little is excreted indicating that the vitamin is used to fight infection. It is believed that vitamin C is required for maintenance of thymic reticular cells. Supplementation with this nutrient has shown lymphocytes to have an increased response to infective agents. Evidence points to the inability of phagocytes to mobilize to inflammed sites when a vitamin C deficiency exists. It is suggested that the vitamin's influence on cell motility is by direct effects on the synthesis and assembly of the micro tubular structures. Still other research has identified vitamin C as being able to enhance interferon production. Although its mechanism of action is still unspecified, vitamin C, when present at adequate levels, is capable of acting as an anti-infection agent.

Nothing is as powerful as an idea whose time has arrived. Now with the technology to bring this dream to reality, these total probiotic have been born.

SUMMARY

We have found these products useful for anyone who has ever had antibotics, hormone therapy, anyone who eats meat, or anyone who eats wrong food or wrong food combination. As you can see, there is a big list of people who benefit from the combination of the right probiotics with co-factors and synergists.

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SECOND BRAIN VS. CEREBELLUM TECHNIQUE

Sheldon C. Deal, D.C., N.M.D.

ABSTRACT

This paper compares the second brain or Pre and Post cordial tap technique with the cerebellum technique. It adds some new findings on the cerebellum technique which in turn reveals a differential diagnosis between the two techniques, without this knowledge the physician could be mistaken on which of the two conditions the patient has.

UPDATE

At the 1995 annual convention of The Society for Neuroscience held in San Diego, new studies were presented that suggest the Cerebellum, a brain area long linked only to motor skills, makes small but crucial contributions to cognitive processes.(1)

Using imaging technology to monitor the brain at work, Julie Fieg of Washington University (St. Louis) saw the cerebellum light up when subjects tried to produce a verb that matched a picture (i.e., "Bark" for a photo of a dog). When participants merely read verbs, the region remained silent.

Fieg and her co-workers then studied a male stroke victim with serious cerebellum damage. He had regained near-normal function but struggled in several minor cognitive aspects, including verb production.

Finally, the researchers found that activity associated with verb generation diminished quickly when subjects practiced with specific words. After less than 15 minutes, the cerebellum ceased activating when subjects were confronted with a familiar production task.

Supporting this discovery, Peter Strick of the VA Medical Center in Syracuse, N.Y., found that the cerebellum does indirectly send signals to the cerebral cortex (considered the brain cognitive center) as well as areas associated with physical skills.(2)

HISTORY

These findings certainly support and augment Dr. George Goodheart's notions on the cerebellum, which he presented the technique to ICAK in 1994. The highlights of Dr. Goodheart's technique were as follows:

1. Patients with a cerebellar fault would have weak muscles that would only show up after repeated muscle activation and would not correct with neurovascular or neurolympathic technique but would respond to spindle cell and Golgi tendon activity.
2. The weak muscles would not show on the T.S. line until after repeated muscle activation.
3. 90% of these patients had a subluxation of C-1 but also could be occiput and/or Sacrum.
4. The C-1 subluxation would show with a thumb T.L. but not a finger T.L.
5. Choline would prevent the problem from reoccurring, but sometimes Vitamin E was needed for the body to convert choline into acetylcholine.
6. These patients had selective dehydration and would respond to water if held in the mouth but not if swallowed.
7. These patients had a disturbance that produced past pointing, and exterior muscles could be weakened by having the patient do finger approximating with the eyes open and then closed.

The second brain technique was presented to ICAK by Dr. Goodheart in 1979. It has since been referred to as the Pre and Post Cordial Tap. This author's perspective stems from being one of the original dirty dozen and this is one of the rare techniques that could do the patient harm if done incorrectly. Therefore, don't attempt this technique unless you are sure of what you are doing. The technique was an outgrowth of some original Russian research that showed the right and left radial pulses were not always identical, and the four heart valves did not always open and close in unison, therefore, there must be some sort of second brain present to account for these mysteries. The correction of this lesion when present, produces phenomenal results, such as increased circulation, increased range of motion, reduction of red blood corpuscle clumping, and increased patient tolerance to blood pressure cuff pressure on the extremities. (3)

The highlights of Goodheart's technique were as follows:

1. Make sure the patient does not have a hyoid lesion which would give an indication of a right and left brain problem. The hyoid can be challenged but not therapy localized.
2. Choose a strong muscle which corresponds to a problem area in the body and have the patient hum and then count.
3. If humming weakens the indicator muscle then have the patient count while you tap over the right side of the heart anteriorly (sternum) and posteriorly (spinal) at the same time.
4. If counting weakens the indicator muscle then have the patient hum while you tap over the left side of the heart anteriorly (left front rib cage) and posteriorly (left rear rib cage) at the same time.
5. Blood pressure cuff pressure and range of motion can be checked both before and after.

New Findings

While doing the cerebellar technique, I serendipitously noticed that a patient with this lesion; number one, could not do two things at once without weakening a strong indicator muscle, such as tapping their fingers and wiggling their toes, or speaking and tapping their fingers. In other words, any dual combination I had them try would weaken them. Then, number two, was that a cerebellar lesion patient would weaken on humming, but only upper body muscles and counting would weaken only lower body muscles. In other words humming would weaken any upper body muscle, every single time and counting would weaken any lower body muscle every single time. The dividing line between upper and lower body muscles was the quadratus lumborum, which would weaken on counting and on humming.

Conclusion

When checking patients for a second brain lesion, I noticed, along with many colleagues including Dr. Goodheart, that 9 times out of 10, the patient would go weak on humming. In other words, I was finding Cerebellar lesions many times, but didn't know it. This would explain why the second brain correction wasn't lasting and I would have to keep repeating the correction. I now know to check an upper body muscle and an lower body muscle to differentiate the two lesions. I can also verify my findings by doing additional test such as RMA or finger approximating with eyes open and closed.

When you can verify a finding by more than one testing method, it takes you from being a good kinesiologist to being a better kinesiologist. Try out these new findings, and you will be amazed at the consistency. This is definitely one more piece of the jigsaw puzzle.

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FREEDOM FROM FEAR FOREVER

James V. Durlacher, B.A., D.C., DIBAK

ABSTRACT

One of the most overlooked areas of the health triangle is the mental (psychological) side. Unless the doctor has a specific interest in this area, he/she usually concentrates on the structural (physical) and the chemical (nutritional) sides and hopes that this will take care of the mental side as it is well known that all sides are interdependent and interrelated. This book will enable the doctor to physiologically treat the mental side of the triangle without talk-out therapy.

INTRODUCTION

There are very few really original thoughts. Most are additions or variations on the original. Roger J. Callahan, Ph.D., a clinical psychologist developed the original concepts and unselfishly shared his Callahan Techniques with me and the members of the International College of Applied Kinesiology as well as his own profession, from which I have utilized and added to in writing this book.

In this book you will be able to look into your patients' nervous system or your own body, your body's nervous system, where all things that have happened to you from the time of conception are recorded. Through the use of the procedures that you will learn, you will be able to literally ask if the body has any phobias, fears, anxieties, addictions, compulsive behaviors, negative life beliefs, unresolved issues or evidence of post traumatic stress syndrome. In addition, it will teach you to treat and in most cases abolish these things without the use of drugs or long drawn out counseling sessions. The new method is done by stimulating certain acupuncture points on the body — tapping on them with your fingers. This has the same effect as inserting an acupuncture needle without being invasive. The tapping procedure can take as little as five minutes in very simple cases or hours over the course of a number of sessions if there is a very complex problem. Usually, however, most problems are overcome in less than fifteen minutes.

Use the information you find in this book. Free your patients, yourself, your loved ones, or your friends, of the self-defeating behaviors that have kept you or them prisoners with the use of Acu-POWER.

DISCUSSION

This 220 page book is an extension of the work of Callahan who wrote and presented the original paper Five Minute Phobia Cure to the ICAK in 1981. He subsequently wrote a book of the same title which was published by Enterprise Publishing Co. of Wilmington, DE in 1995.

Freedom From Fear Forever opens with the chapter - *Your Body Knows* which discusses the fact the everything that has ever happened to an individual is recorded in his/her nervous system.

Chapter 2 gives the history of Applied Kinesiology and how it was discovered and developed. Chapter 3, *Physician Heal Thyself,* is a short accounting of how this author used the treatment on himself.

This is followed by a discussion of the triad of health, an introduction the psychological reversal-self sabotage, quality muscle testing, therapy localization and introduction to meridian therapy, neurological disorganization, its diagnosis and treatment and the basic treatment, which is utilized in all the other applications.

In addition to psychological reversal the book discusses with great clarity, another stumbling block, Negative Life Beliefs... untrue feelings of inadequacy or other negatives from remarks made by authority figures. Their

origins and how to dispel them are clearly laid out.

We live in a world of addictions (tobacco, food, alcohol and drugs), post-traumatic stress syndrome, sales rejection and (job) burnout, mental barriers to physical activities, academic barriers, compulsive behavior and obsessive thoughts. These are some of the subjects that affect our daily lives and are covered in this book.

Conclusion

The basic treatment procedures that are given in Chapter 10 are performed by using standard applied kinesiology muscle testing, therapy localization and percussion tapping on specific acupuncture points while the individual is thinking of his/her problem. It has been found to be a fast, effective and long lasting treatment procedure which can be taught to the patient.

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TOTAL INTEGRATION OF MUSCLES

Timothy D. Francis, M.S., D.C., DIBAK

ABSTRACT

After manually testing muscles for more than fifteen years, and learning, trying, and experiencing numerous different methodologies for testing as well as various procedures for correcting muscle dysfunction; I proceeded on a journey to find the most complete and optimal muscle correction procedure. The destination I have arrived at thus far has led to what I call the total integration of muscles. Here is my story.

INTRODUCTION

I began manually testing muscles in 1981 while a student at the Los Angeles College of Chiropractic. At that time Dr. Betrand Faucret was Chairperson of the Principles and Practice Department. He had insisted that postural analysis, manual muscle testing, S.O.T. (Sacro-Occiptal Technic), and Applied Kinesiology be included in the course curriculum for technic. I diligently studied and practiced the various muscle testing procedures familiarizing myself, but not really comprehending how important these procedures were until later in my career.

In the fall of 1985 while in - practice in Las Vegas, Nevada I experienced what I perceived to be at that time a serious low back injury. I was treated by Dr. Larry Schleisner and received wonderful results. This experience as a patient was really the impetus to start on the path of studying manual muscle testing and applied kinesiology. When Dr. Schleisner treated me, he utilized general muscle indicators (the arm pull down and group hamstring tests) along with doctor therapy localization to the spine to determine where and how to adjust. So I went back to my office and mimicked what had been done to me and began getting better results than I had been previously. There were still many things I did not understand and too many inconsistencies so I enrolled in the 100 hour course in applied kinesiology being taught in Los Angeles by Dr. Bob Blaich.

Dr. Blaich was so exciting to listen to and completely captivated my inquiring mind as I became aware of how much I had been missing in the overall treatment of my patients. This led me on a quest for the optimal protocol of treatment for my patients. I began traveling extensively to study with the likes of George Goodheart, D.C.; David Leaf, D.C.; Lance West, D.C.; Victor Frank, D.C.; John Amaro, D.C.; as well as various homeopathic physicians. After numerous years of studying and practicing the various modifications and methodologies of applied kinesiology, I became very interested in developing a fast, reliable, safe, complete, and optimal correction of muscle dysfunction. The discussion that follows is the culmination of my efforts.

DISCUSSION

Initially in practice, I thought that if a muscle tested strong in the clear, this was considered good, and I proceeded to search for weak muscles which I would fix via one of the five factors of the inter-vertebral foramen and/or origin/insertion technic, golgi tendon organ and/or spindle cell technic. Once the weak muscle tested strong, I thought everything was O.K. However. as I'm sure you are painfully aware, nothing could be further from the truth. First of all the muscle may test strong in the clear, but exhibit what Dr. Goodheart termed a fifty - one percenter; that is it may weaken when one or more of the five factors of the I.V.F. is taken into consideration: neurolymphatic, neurovascular, acupuncture alarm point, nerve supply and cranial sacral respiratory mechanism. The muscle may also demonstrate origin/insertion, golgi tendon organ, and/or spindle cell involvement. The muscle may weaken after stretch (myofascial

involvement) or post maximum contraction (strain/counter-strain). It may weaken on repeated muscle testing (aerobic/anaerobic dysfunction) or upon repeated muscle activation patient induced (testing the muscle after the patient moves the associated joint via contraction of the primary muscle ten times). It may also weaken upon contraction prior to a synergistic muscle (reactive muscle) or antagonist muscle (frozen muscle pattern). There may also be an emotional component, via the emotional neurovascular reflexes. Brain activity may also influence muscle testing outcomes (right/left brain testing, forebrain/hindbrain; i.e., eyes closed/opened patterns). Position of the patient via posture (supine/prone, seated/standing) also exhibit differences. The type of test performed; i.e.. doctor initiated testing; patient initiated to submaximum contraction and to maximal contraction may produce test outcome differences. Eye position of the patient as in ocular lock and/or eyes into distortion if involved does influence the test result. Testing the muscle through the associated joints R.O.M. may exhibit weakness but not when tested in the standard position. And yet, more specific muscle testing ala Beardall methodology may exhibit weakness in a portion of a muscle group and/or within a portion of the muscle itself but not when testing the group (example: quadriceps test strong in the clear but when the vastus medialis is tested in an isolated position it exhibits weakness; or the vastus medialis tests strong in the clear but when the proximal portion of the vastus medialis is isolated only that portion exhibits weakness.)

As a clinician in practice trying to render the very best care possible to my patients, I found it very cumbersome and difficult to methodically correct muscle dysfunction ruling out every possibility noted in the above discussion. With experience, based upon the patient's history, postural evaluation, T.S. line (temporosphenoidal) palpation and pulse point diagnosis one could often find and correct the primary dysfunction and yet just as often recidivism would occur in the muscle.

Why is that? This is one of Dr. Goodheart's favorite questions. It is because of his inquisitive nature that today we have the body of knowledge known as applied kinesiology. Since I usually try to emulate those people I admire the most, I started asking not only why is that, but also how can I simplify that?

In May of 1995 while attending a seminar in Laguna Beach by Dr. George Goodheart, I was asked by my friend and teacher Dr. Scott Walker if I could assist him and his wife in a workshop. I humbly accepted and proceeded to attempt to demonstrate the particular technic that was being practiced utilizing a group quadriceps test.

Dr. Scott Walker was playing patient and his wife, Dr. Deb Walker, the doctor. The workshop table was rather high for Dr. Deb as she was unable to properly test the quadriceps. However she said she usually therapy localizes the muscle and tests a strong indicator muscle for weakening. Well my first reaction was that this might pick up a spindle cell involvement but would miss other muscle involvements. So I proceeded to get her a chair so she would be able to properly test the quadriceps.

The following week in my office a new patient came in with a severe acute bursitis of the right shoulder. Bob C. was already on anti-inflammatory medication and was not able to move his right arm. I reflected back to what Dr. Deb Walker had told me and thought I would give it a try. So I went through all of Bob's shoulder muscles in this fashion and sent him home to be seen in two days. Two days later I saw Bob C. and noticed he had written down that he was about 50% better. I thought that was pretty good and proceeded into the room. I questioned Bob about his shoulder and to my surprise he raised his arm all the way above his head and remarked he still had some discomfort! Well I told him these things sometimes take more than one treatment and proceeded to fix what I found, only to be amazed that all his shoulder muscles tested strong in the clear. I then told him to return in two more days and his shoulder problem was completely resolved.

During the same week, another new patient came in, Monica. Monica was in such severe pain that she had to sit upright with pillows supporting her on either side. She could not bend, turn her head and could only walk by shuffling her feet. Monica early on in life had two Harrington rods inserted from T2 down to about L2. Again, I was faced with a problem that I simply could not manually muscle test in the usual fashion. I proceeded to therapy localize each muscle and fix what I found. When I was finished, Monica left the office carrying her two pillows smiling and about eighty percent pain free. Her case also resolved quickly and to my astonishment, all the muscles I treated held their corrections and continue to do so.

While at NET success in Montana, I was working on some doctors there when Dr. Jim Hogg observed what I was doing and suggested I tap over the muscle rather than use the temporal tap as an audit to see if the muscle treatment was complete; he said John Bandy, D.C. often uses this particular technic. I tried it and found it to be highly useful in this protocol although it still did not pick up the need for neurologic tooth and/or a stress receptor and/or a nerve supply problem.

Some of the doctors I treated in Montana have utilized a portion of this procedure with highly effective results on their patients. They have since called and written me letters verifying the results. Needless to say, I was very impressed by all this and continued to work on and refine the protocol until it has evolved into what I have today.

Conclusion

Muscle dysfunction as perceived by manual muscle testing is an exciting, new, and viable approach to health care. It is the interaction of mind with matter utilizing quantum events occurring in neurons.

The total integration of muscles protocol is a fast, accurate, effective, and simple method to find and fix muscle dysfunction. Upon proper completion of treatment, the muscle will test strong in clear regardless of whether the test is doctor-initiated, patient-initiated to submaximum, or maximum. The muscle will be free of all fifty-one percenter involvements. strain/counterstrain, repeated muscle testing, and repeated muscle activation as well as right/left brain testing, eyes open/closed testing, and testing throughout the joints range of motion. Fascial flush, origin/insertion, emotional involvement, organ dysfunction, and nerve supply are addressed separately with the protocol as well as stress receptor and neurologic tooth.

I am very happy to report this has been of tremendous therapeutic value to my patients and to those patients who are being treated by other doctors I have shared this with. We are now finding muscle dysfunction that we previously were missing and the corrections we are making are more complete and much longer lasting.

PROCEDURE

1. Therapy localize to muscle, if T.L. causes strong indicator muscle to weaken, proceed to three; if not, proceed to two. (supine/prone, seated/standing)

2. Therapy localize to muscle with patient's eyes closed; if this causes a strong indicator muscle to weaken, proceed to three and continue through procedure with patient's eyes closed; if not, proceed to nine. (supine/prone, seated/standing)

3. Based on the muscle/organ/meridian correlation, correct the muscle via the Riddler/Frank sequence, proceed to four.

4. Tap over the entire muscle (with patient's eyes open or closed, depending on how you started); if this causes a strong indicator muscle to weaken, proceed to five; if not, proceed to nine.

5. Check muscle for fascial flush, if positive, perform fascial flush, then proceed to six.

6 Check muscle against therapy localization to emotional neurovascular points (cross T.L.), if this causes your strong indicator muscle to weaken, run N.E.T. protocol; if no T.L., and/or upon completion, proceed to seven.

7. Check the muscle for need of origin/insertion technic, perform 0/I technic if needed, then proceed to eight.

8. Check the corresponding organ's function via the neurolymphatic, neurovascular, acupuncture alarm point, T.L. over the organ, T.S line point, or any other point that accurately reflects the organ's function and fix what you find. Now test the muscle (eyes open/closed); it should be strong, proceed to thirteen; if not proceed to ten.

9. Test muscle; if weak proceed to ten; if not, proceed to thirteen.

10. Check muscle against its own stress receptor and/or proceed to eleven.

11. Check muscle against its own neurologic tooth and/or proceed to twelve.

12. Check muscle against its own nerve supply. Retest muscle (eyes open/closed), supine/prone; seated/standing and it should now test strong; if not, return to one, something was missed. Proceed to thirteen.

13. Therapy localize to:

    a. Poison (eyes open/closed)
    bilateral knife edge to patient's nipples ➔ Tap L5(1)

    b. Toxicity (eyes open/closed)
    five fingers below xiphoid process ➔ Tap T11, LI, T7(1)

    c. Corpus Callosum (eyes open/closed)
    two fingers above eyebrows ➔ Tap C4, T4, T8(1)

    d. Circulation (eyes open/closed)
    four fingers from same hand over sternum ➔ Tap T2, T8, T12(1)

    e. Pineal (eyes open/closed)
    one finger between eyebrows ➔ perform pineal correction(1)

f. At this point, the muscle should not weaken against right/left brain activity, forebrain/hindbrain (eyes closed/open) activity and should be strong when tested through its own range of motion. The muscle should not only test strong in the clear (eyes open/closed) but should also not weaken with T.L. to its own neurolymphatic, neurovascular, alarm point, origin/insertion, golgi tendon organ and spindle cell; therefore this procedure eliminates all 51%-ers (subclinical muscle involvement). The muscle should also not weaken after a three second maximum contraction (strain/counterstrain procedure), repeated muscle testing (aerobic/anaerobic testing); and repeated muscle activation (having the patient contract the muscle ten times) procedures.

Proceed to fourteen.

14. Cross therapy localize muscle to bladder one points using index and middle finger of same hand; if this causes a strong indication muscle to weaken; homeopathy is required. Check muscle organ/remedy correlation. Note: Bladder one points should not T.L. in the clear; if they do, RNA supplementation is required.(2)

FOOTNOTES

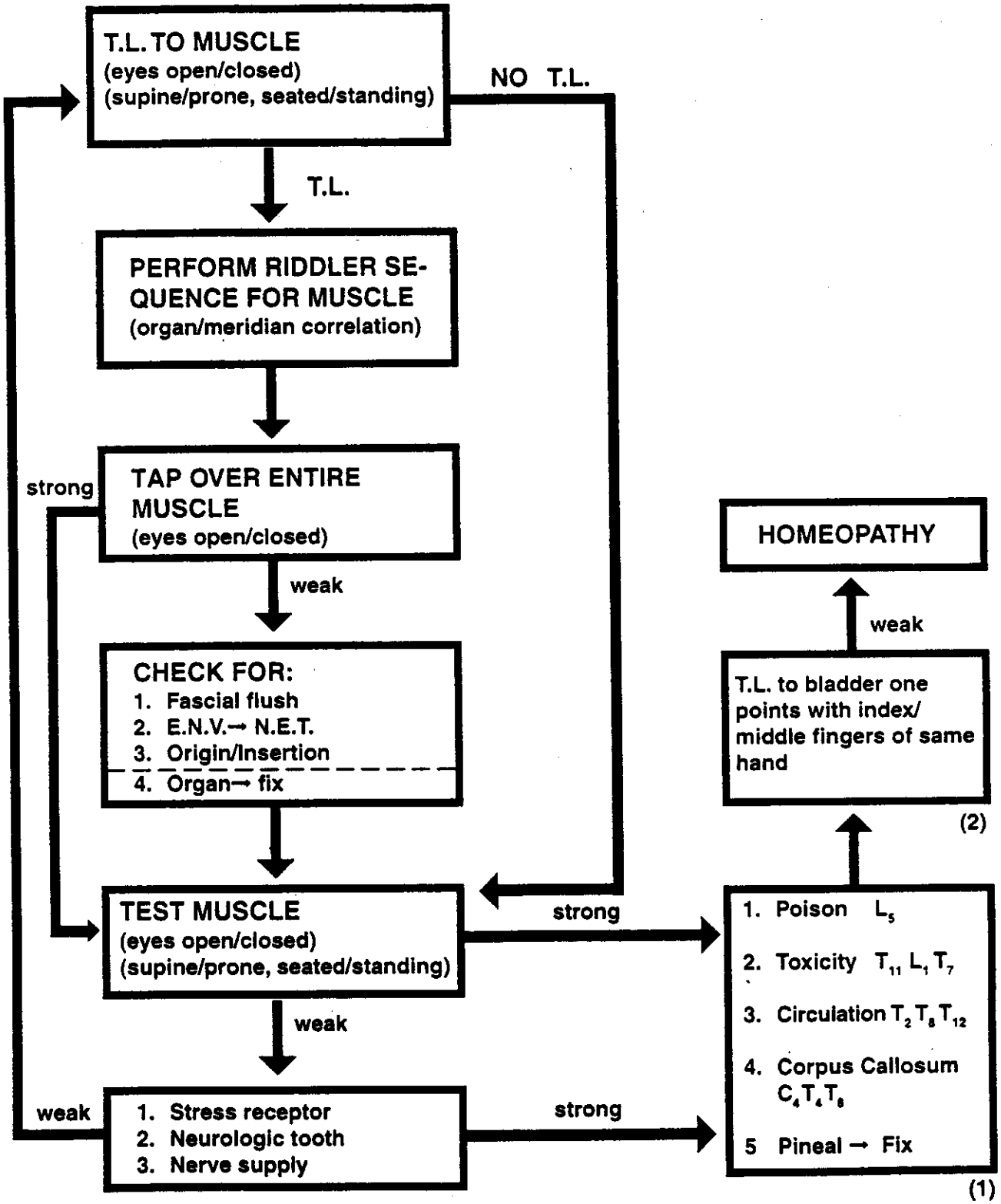
1. The Poison, Toxicity, Corpus Callosum, Circulation, and Pineal Diagnostic/Therapeutic procedures are from T.B.M. (Dr. Victor Frank)

2. The Therapy Localization to Bladder One Points using the index and middle finger of same hand is from N.E.T. (Dr. Scott Walker)

MUSCLE	GOODHEART ORGAN/MERIDIAN	RIDDLER/FRANK SEQUENCE
1. Upper Trapezius	Kidney	T1-5-8
2. SCM	Stomach	T8-10-12
3. Scalenes	Stomach	T8-10-12
4. Masseter	Stomach	T8-10-l2
5. Ext. Pterygoid	Stomach	T8-10-12
6. Int. Pterygoid	Stomach	T8-10-12
7. Temporalis	Stomach	T8-10-12
8. Hyoid Muscles	Thymus	T9
9. Sacrospinalis	Bladder	L5
10. Latissimus Dorsi	Pancreas	T5
11. Subclavius	Pituitary	C2-5-T1
12. PMS	Liver	T2-5-8
13. PMC	Stomach	T8-10-12
14. Pectoralis Minor	Stomach	T8-10-12
	Pituitary	C2-5-T1
15. Serratus Anterior	Lung	R T2-9-L3
		L T1-8-L2
16. Coracobrachialis	Lung	R T2-9-L3
		L T1-8-L2
17. Deltoid	Lung	R T2-9-L3
		L T1-8-L2
18. Rhomboid	Liver	T2-5-8
19. Biceps	Stomach	T8- 10-12
20. Triceps	Pancreas	T5
21. Supraspinatus	Pituitary	C2-5-T1
22. Infraspinatus	Thymus	T9
23. Middle Trapezius	Spleen	T1-5-9
24. Lower Trapezius	Spleen	T1-5-9
25. Subscapulus	Heart	T2-8-12
26. Teres Minor	Thyroid	T4
27. Teres Major	Spine	GV27
28. Levator Scapula	Parathyroid	C3
	Stomach	T8-10-12
29. Forearm Muscles	Stomach	T8-10-12
30. Hand Muscles	Stomach	T8-10-12
31. Abdominals	Small Intestine	L5
32. Quadratus Lumborum	Large Intestine	L5
33. Psoas	Kidney	T1-5-8
34. Iliacus	Kidney	T1-5-8
35. Quadriceps	Small Intestine	L5
36. Hamstrings	Large Intestine	L5
37. Sartorius	Adrenal	T7-9-11
38. Gracilus	Adrenal	T7-9-11
39. Adductors	Reproductive	L5

MUSCLE	GOODHEART ORGAN/MERIDIAN	RIDDLER/FRANK SEQUENCE
40. Gluteus Medius	Reproductive	L5
41. Gluteus Maximus	Reproductive	L5
42. TFL	Large Intestine	L5
43. Piriformis	Reproductive	L5
44. Popliteus	Gall Bladder	T4
45. Gastrocnemius	Adrenal	T7-9-11
46. Soleus	Adrenal	T7-9-11
47. Post. Tibialis	Adrenal	T7-9-11
48. Ant. Tibialis	Bladder	L5
49. Peroneus Longus	Bladder	L5
Peroneus Brevis	Bladder	L5
50. Peroneus Tertius	Bladder	L5
51. Flexor Hallicus Brevis	Stomach	T8-10-12
Flexor Hallicus Longus	Stomach	T8-10-12
52. Intrinsic Foot Muscles	Stomach	T8-10-12
53. Diaphragm	Lung	R T2-9-L3
		L T1-8-L2

TOTAL INTEGRATION OF MUSCLES
Flow Chart



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Case History:

CORRECTION OF INGUINAL HERNIA BY APPLIED KINESIOLOGY MANAGEMENT

Stephen J. Kaufman, D.C.

ABSTRACT

Two cases of inguinal hernia with successful correction by standard methods of applied kinesiology are described.

INTRODUCTION

Inguinal hernia is a tear in the muscles and soft tissues of the inguinal area, with greater or lesser protrusion of the abdominal contents. The patient may go for a substantial period of time before requiring surgery, or strangulation and ischemia of the tissues may occur, requiring immediate treatment. The usual medical therapy is surgical. Re-occurrence of a hernia after surgery is a possibility.

Case History: A nine month old male child presented with a diagnosis of a right inguinal hernia, confirmed by the child's pediatrician and two pediatric surgeons. His testicles and surrounding area were bluish. There was a slight bulge over Poupart's ligament. The recommendation was for immediate surgery. The mother wished to avoid surgery if at all possible and with her pediatrician's "permission," postponed the date for two weeks.

Because of the patient's age, it was not possible to muscle test him directly. Postural assessment and clinical signs were assumed to be presumptive evidence of muscle imbalance, and treatment was directed at the origin-insertion, Golgi tendons, spindle cells, and neurolymphatic reflexes of the right psoas, adductor, sartorius, gracilis, abdominal, and rectus femoris muscles. Block correction of a Category II was performed. Treatment of inguinal ileofemoral reflexes was performed with Bennett's neurovascular technique. Supplementation with Standard Process Cataplex E(3) was given. Within several days, after being treated every other day, the patient's genitalia returned to normal color and the inguinal bulge returned to normal. A total of 8 treatments were given. The patient was taken to a third pediatric surgeon who now could find no trace of a hernia. He was then taken back to one of the original surgeons who also could find no trace of a hernia, but recommended he have the surgery anyway! (no comment)

I saw this patient and his mother periodically for several years after, and his hernia never recurred.

Case History: A forty-five year old male presented with a right inguinal hernia of a year's duration. The patient was 6'1" and fifty pounds overweight. He was strongly considering surgery. Treatment consisted of testing and strengthening weak sartorius, adductor, psoas, quadriceps, piriformis, gluteus medius, abdominal, TFL, gluteus maximus, and hamstring muscles by the usual applied kinesiological approaches. Correction of an ileocecal valve syndrome, Category II pelvic lesion, upper cervical fixation, and lateral occiput was performed. Trigger points in the abdomen and groin area were treated with digital pressure for 10-30 seconds. Nutritional supplementation included Cateplex E, E(2) and F, and Calcium Lactate.(3)

This patient had complete symptomatic relief and resolution of all signs of a hernia within six visits. It is interesting that this was obtained with no loss of weight. Patient remained improved one year later.

Discussion

These two cases illustrate successful management of inguinal hernias, both in a short period of time. I have treated approximately ten other cases with similarly positive outcomes over the years. This approach is certainly more cost effective than surgery.

Conclusion

Applied Kinesiology should be considered as a possible therapy in cases of uncomplicated inguinal hernia, if time permits a therapeutic trial before surgery. It may be possible to resolve the problem in an economical, painless and safe manner.

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Infertility: SUCCESSFUL MANAGEMENT BY APPLIED KINESIOLOGY AFTER FAILURE OF MEDICAL TREATMENT

Stephen J. Kaufman, D.C.

ABSTRACT

Several cases of primary infertility treated by applied kinesiology, resulting in full term pregnancies are described. An A.K. treatment protocol is described.

INTRODUCTION

According to medical estimates, infertility may occur in 10-20% of couples. Treatment generally consists of fertility drugs or surgery, rarely of any dietary or nutritional counseling. A couple is considered infertile if they have been actively trying for one year or more to conceive. Since 1979, I have treated approximately 60 women specifically for infertility. All have had complete gynecological exams and medical treatment, usually including fertility drugs such as Clomid. Most have been infertile for three years or more. Approximately 20 of these women have conceived healthy children after treatment with applied kinesiology, in spite of previous failure of all medical methods. Some have gone on to have two or three children.

Treatment is, of course, individualized but consists of testing and strengthening all muscles related to pelvic mechanics, that is, piriformis, gluteus medius, gluteus maximus, adductor, sartorius, gracilis, abdominal, tensor fascia lata, latissimus, and sacrospinalis muscles. In addition to muscles weak in the clear, special attention should be given to high gain procedures for the neurolymphatics, neurovascular, and especially fascial flush techniques.

Correct all pelvic faults including Category 2, Category I, Category III, sacral wobble, sacral respiratory and fixation, lumbar subluxation and fixation, and P.L.U.S. indicators. Correct all sphenoid, pituitary drive, and other cranial and upper cervical lesions. Correct PRY indicators and A-O and L5-S1 fixations, ileocecal valve and small intestine and N.E.H.T. malabsorption indicators. Balance the acupuncture meridians according to the Five Element Laws and treat B and E points. Perform coccygeal lift and spinal detorquing procedures as needed, and do all procedures in sitting, standing and gait as well as prone and supine.(1) Nutritionally, I take all of these patients off coffee, sugar, tea, hydrogenated fats, and supplement as needed with Cataplex E, ovary and uterine substance, pituitary, thyroid, betaine HCl, chlorophyll perles, iron, selenium, zinc, flaxseed oil, calcium, vitamin A, and members of the B-complex.

Case History: Patient was a 32 year old woman who had been trying to get pregnant unsuccessfully for six years. She had been unresponsive to fertility drugs. Treatment consisted of the above mentioned A.K. techniques. She conceived after seven weeks of treatment, and delivered a normal baby. She developed cholelithiasis after delivery and was told to have her gall bladder removed. Treatment with olive oil, AF Betaford and visceral manipulation produced a loud "pop" over her gall bladder and complete resolution of all symptoms. She had a second healthy child two years later.

Case History: Patient was a thirty year old woman who had been trying unsuccessfully to conceive for five years. I treated

this patient three or four times, primarily correcting a category I pelvic fault. She became pregnant one month after her first treatment, and went on to have three healthy children.

Case History: Patient was a 35 year old woman referred by the above patient. I only treated this patient for a month, at which time she ceased treatment due to personality clashes with me. However, she became pregnant shortly thereafter (after seven years of previous failure under medical care), and sent me several other patients. (Obviously, this particular outcome did not result from the patient's fondness for her doctor.)

Case History: The patient was a 32 year old woman who had tried unsuccessfully for five years to conceive. She became pregnant two months after starting treatment, and now has a healthy 12 year old son.

Discussion

It seems obvious that at least some cases of infertility are due to functional non-pathological causes, which would include deficiencies of various vitamins and minerals, subnormal thyroid, pituitary, adrenal, or ovarian function, and especially, disturbed pelvic and lower back biomechanics. It seems likely from clinical experience that the hormonal system can be positively influenced by cranial technique, especially as applied kinesiology to the sphenobasilar symphysis and pituitary drive procedures. Emotional factors may also play a strong role, although they were not discussed in this paper. Here is a further clinical note regarding morning sickness. For many years I had difficulty controlling this symptom. However, Cataplex C and Chlorophyll perles by Standard Process[2] have produced excellent results, as recommended by George Goodheart, D.C.(3)

Conclusion

Applied Kinesiology procedures may be useful in restoring fertility in some patients with functional infertility.

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FLEXOR-EXTENSOR TESTING

Stephen J. Kaufman, D.C.

ABSTRACT

A modified version of therapy localization is described, with a higher rate of discovery.

INTRODUCTION

Most applied kinesiologists utilize therapy localization to detect structural faults. Usually a convenient muscle is used, without regard to the appropriateness of that muscle. This author has observed that in some cases an area such as the sacroiliac joint or the ileocecal valve may not therapy localize using the more commonly used flexor muscle (e.g. the biceps or pectoralis major clavicular muscle), but will therapy localize using the extensor muscle (e.g. the triceps or middle trapezius muscle.) The opposite may also hold true.

Discussion of Procedure:

1) Therapy localize on area of suspected clinical involvement (e.g. ileocecal valve, sacroiliac joint, neurolymphatic reflex, spinal segment, emotional or other neurovascular points, etc.)

2) Test using a common flexor indicator muscle (e.g. hamstring, biceps, psoas, pectoralis major, etc.) If strong, test using the related extensor muscle (quadriceps, triceps, tensor fascia lata, middle trapezius, etc.) Often, an area will weaken using an extensor indicator muscle but not a flexor, or vice versa. Frequently, an area will weaken using the psoas but not the TFL as an indicator, or the triceps instead of the biceps. Fix as you usually would. In this regard, it is interesting how often the quadriceps will weaken when the patient is prone when using it as an indicator muscle.

CONCLUSION

Flexor-extensor testing may show up weakness missed in less extensive testing.

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SITTING PSOAS FLEXION TEST

Stephen J. Kaufman, D.C.

ABSTRACT

A new muscle testing procedure, an outgrowth of the P.L.U.S. technique, is described with a high rate of discovery and good clinical outcome.

INTRODUCTION

Goodheart has described a method of manual muscle testing where the patient is instructed to flex forward at the waist while sitting, and the piriformis, iliacus, latissimus dorsii, upper trapezius, and SCM muscles are tested. In a patient with normal pelvic and cervical bio-mechanics, it is expected that the right piriformis, iliacus, and SCM and the left latissimus and upper trapezius will weaken. If the expected weaknesses are not observed, the doctor looks for the presence of hidden structural faults such as fixations, pelvic categories, etc., especially on weight bearing. This P.L.U.S. procedure has been productive of excellent therapeutic results.

DISCUSSION

It occurred to me that one could also test the psoas and hip flexor group in a seated flexion position. With the patient seated, have him bring his knee straight up and test by pushing down.(1) If weak, strengthen by using the usual correction methods for the psoas muscle, i.e, golgi tendon stimulation, neurolymphatic, neurovascular, etc. If it is weak on both sides, check and correct for a lateral occiput. The psoas/hip flexors should now be strong bilaterally when tested in a seated position.

Have the patient flex their trunk forward 30-40° and retest the psoas/hip flexors. Since these muscles flex the thigh or trunk, they should not turn off under these circumstances. However, in a large number of patients, one or both psoas will weaken dramatically when the patient flexes forward. It is such a pronounced weakness that the patient thinks they could never be strong in that position. Stimulate the lymphatic on the weak side(s) front and back for 30 seconds while the patient is flexed forward.

This is very important. Stimulation of the neurolymphatic with the patient in the upright or neutral position will not correct this problem.

After neurolymphatic stimulation, re-test the patient's psoas/hip flexors in a sitting flexion position. They will now be quite strong. Occasionally attention may be needed at the neurovascular or muscle insertion, or a lateral occiput may need to be corrected.

This procedure is productive of good clinical results! In many types of spinal problems and low back pain, especially when bending, this procedure gives marked therapeutic benefit. I have been doing it for three years, and it doesn't usually need to be repeated.

CONCLUSION

Testing and correcting a sitting psoas flexion fault produces good clinical results in low back and other spinal problems. "Fundamentally, we are an ongoing therapeutic group." G. Goodheart.(2)

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THE ATLAS AS A NEUROMUSCULOSKELETAL MONITOR

Stephen J. Kaufman, D.C.

ABSTRACT

Another variation of therapy localization is described. Where will it all end?

INTRODUCTION

M.B. DeJarnette used to teach a procedure in Sacro Occipital Technique where the chiropractic assistant pulls on a patient's heel tension while the doctor palpates both sides of the patient's atlas and monitors for equal motion.(1)

I thought, "suppose I challenge an area, and the area challenge doesn't weaken a muscle directly, but the challenge does affect the atlas? Suppose that the atlas is monitoring the neuromusculoskeletal system and gives an alarm when the stress load is increased?"

Discussion of the method:

The procedure is simple.

1) Find a suspected area of involvement, e.g. a vertebral segment, sacroiliac joint, ileocecal valve. Rule out any positive therapy localization or challenge by testing an intact muscle.

2) Rule out any positive therapy localization or challenge of the upper cervical area. Correct as needed.

3) Have the patient TL the C1 - C2 area with two fingers, and challenge (or TL) the suspected area of involvement (e.g. the S.I. joint) simultaneously. I usually do this with the patient sitting. In other words, patient TL's the atlas while the doctor challenges for a posterior ileum and tests an indicator muscle.

4) Frequently, after an area has been treated and is negative to other forms of TL, it will show up again when TL'ed simultaneously with the atlas. One then corrects the area in the usual fashion (in this example, by blocking for a Category II.)

CONCLUSION

My concept here is that the atlas is monitoring the structural system.(1,2) Perhaps the posterior ileum is not producing enough nerve interference to cause a muscle to weaken in the clear, but it is causing a disturbance in the atlas which is monitoring it. When the atlas is therapy localized, and the S.I. is challenged, then a weakness shows up. Perhaps this is "51% of a 51%'er." Who knows?

Anyway, this has a significant incidence of discovery. I've been doing this procedure for three years and it gives an improved holding power to standard A.K. manipulations.

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XENOESTROGENS WHAT THEY ARE; WHAT THEY MAY DO; WHAT CAN BE DONE

James C. Kreger, D.C.

ABSTRACT

Xenoestrogens are chemicals that have seemingly unrelated structures and properties, but have in common the ability to exert an estrogen-like influence on the tissues of humans and animals. These chemicals come from many sources and are found as common environmental pollutants and consumer products. A hypothetical method of testing and treating for negative estrogen response may provide a means of neutralizing the physiological effects of those chemicals. The procedure and results are presented.

INTRODUCTION

Since 1979, the scientific community has recognized the property of many unrelated chemicals to exhibit an estrogenic effect on living tissue.(1,2) These chemicals have been labeled xenoestrogens. Some theories have been presented to explain this behavior, but there is much to learn. What is known is that chemicals such as phthalates, (a component of plastics), pesticides such as DDT, PCBs (polycholrinated biphenyls), APEs (alkylphenolic polyethorylate, surfactants from detergents), dioxins, BHA and other preservatives, and more, can link up with estrogen receptors on cells.(3) Some also seem to alter estrogen metabolism by some unknown mechanism.

The overall implications of these chemicals are only partially known. Speculation about the possible pathological consequences has been made by some scientists. However, the potential implications are great because many body systems are known to have estrogen receptors. A look at estrogens' basic functions and where estrogen receptors exist provides a perspective from which to investigate those implications.

Estrogen is known, of course, for its role in triggering and maintaining feminine characteristics and functioning in the female reproductive system. It can be influential in other endocrine system dysfunctions, if out of balance. If not properly eliminated, it is considered a factor in premenstrual syndrome. Estrogen receptor sites are generally known to be in the uterus, ovaries and breast tissue. However, estrogen receptors have also been found associated with hepatic and gallbladder cancers(4), bladder, urethral, and prostatic cancers.(5) Estrogen receptors have also been identified in many animal tissues. They have been found in the submandibular glands(6), hypothalamus and limbic regions of the brains of rodents(7), and in bovine gastrointestinal tissue.(8) This is just a small sample of the literature that has confirmed estrogen receptors in many locations in the body.

If estrogen can function in parts of the body that have no apparent female reproductive significance, then it follows that xenoestrogens may also function in those systems. The question arises as to whether xenoestrogens are artificially stimulating normal activity or tying up a site and preventing normal activity. The body may perceive that all is in order because the sites seem to be properly occupied or triggered in an apparently normal way. A way to discern possible xenoestrogen influence was sought. It was

thought that via muscle testing the body may indirectly show an estrogen overload or intolerance.

Materials & Methods

The method of biomagnetic kinesiology(9) was used to see if the body would reveal an adverse reaction to estrogen. The premise is that if tissue cell receptors are fully loaded or abnormally stimulated by estrogen; or xenoestrogens, then the body may interpret any more estrogen as beyond its capacity to handle. A Premarin tablet was used in testing.

First efforts at testing found little reaction i.e.,weakening, when checking over the abdomen or over GV 27. Other locations of the body were then experimentally tested, and it was found that a weakening response occurred over the bellies of some muscles. It is possible that this is due to a direct influence of estrogen on those muscle groups. However, findings would make more sense to link the reactions to the associated organ. A negative, or weakening, reaction was often found over the Quadriceps femoris, Tensor fascia lata, Pectoralis major, Popliteus, Gastroc/Soleus, and Infraspinatus. To counteract this weakening, various supplements and herbs were tested. The usual suspects for estrogen elimination, Mg, B6, folic acid, etc., had no effect. Next, herbs used for estrogen imbalances were tested. The one that had the most consistent estrogen neutralizing muscle test was Dong Quai.

Dong Quai is called a balancing or regulating herb of the female system. It is usually used with that intent. It seems that it may, rather that supply a missing component, facilitate the clearing of estrogen from the system. This may be happening in the liver or at other sites throughout the body.

The patients who tested weak for estrogen and strong for Dong Quai were given the herb to take supplementally. Subsequent testing often resulted in a strong reaction where a weakness occurred with estrogen. In addition, and most importantly, the patients exhibited an improvement in symptoms.

Results

Patient Cases

1. A thirty-eight year old female, hypersensitive to foods and chemicals, tested positive with estrogen over the Quadriceps femoris. The patient took Dong Quai and food tolerance improved dramatically.

2. A fifty-five year old female treated for dysbiosis and environmental sensitivities responded well to diet and supplementation. However, she continued to experience a persistent problem of burning feet. She had discovered that she was sensitive to the synthetic materials in shoes and could wear them for only one half hour at a time. She wore pure leather moccasins instead. Testing estrogen over the plantar surfaces of her feet was positive. She was instructed to take Dong Quai orally and apply a liquid extract of it on her feet daily. The burning diminished greatly, and she was then able to wear shoes of synthetic material for seven hours per day.

3. A fifty-three year old male experienced bilateral shoulder pain and extreme palpatory tenderness of the infraspinatus. Two years of intermittent chiropractic/A.K., nutritional supplementation, massage, and medication yielded no significant results. Estrogen tested positive over the infraspinatus and Dong Quai negated the test. Three days after beginning Dong Quai, the pain was 90% resolved.

A note should be made that the herb, Dong Quai, was used by itself, not in any herbal combination. Also, it seemed that products from some manufacturers did not test as well as some others. No explanation can be made for this phenomenon.

Discussion

There are a few ramifications of this information and the clinical results. For the doctor treating the chronically ill or environmentally sensitive patient, an extra avenue can be explored. It is straightforward and offers another convenient and accessible method for treatment. Secondly, the concept of xenoestrogens seems to offer one more possible explanation with respect to environmental illness,

i.e., why the body is sensitizing to its environment. It may also explain why, even though pollutants in general are suspect, traditional detoxification methods do not always work well. If the body does not interpret a chemical as a toxin, then it will not "think" the chemical should be eliminated.

Another way in which xenoestrogens may play a role in chronic health problems is that molds and yeast have estrogen receptors and do react to estrogen.(10) Xenoestrogens may be an additional factor in precipitating and perpetuating candidiasis and mycological syndrome. Their presence may either attract fungi or be a coupling agent that holds them in the body.

This technique and supplementation can be considered in cases other than environmentally sensitive patients. As evidenced by one case presented, chronic musculoskeletal problems may respond to this approach.

Conclusion

Xenoestrogens are present in almost every aspect of our present day environment. Their negative influence on health is partially known and the discovery of additional such consequences is considered possible. A method that may possibly detect an overload of those compounds was described. It is based on a hypothetical response that the body might display. Biomagnetic testing provided a noninvasive testing procedure. The clinical results produced were judged to be positive.

Summary of Procedure

1. If xenoestrogens are suspected of causing a health related problem, particularly environmental sensitivities, test the paitent for an overload of estrogen.

2. Place estrogen under a magnet over the bellies of major muscle groups. If a weakness occurs, consider it a positive test.

3. Next, test estrogen against the herb, Dong Quai. If Dong Quai results in a strengthening response, supplement with the herb.

4. Retest on subsequent visits to determine efficacy. Assess results of this test with respect to other findings and symptom picture.

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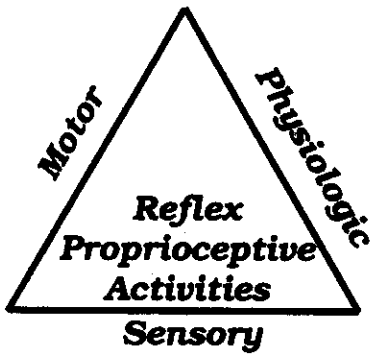
PROPRIOCEPTIVE NEUROMUSCULAR FACILITATION (PNF)

David W. Leaf, D.C., DIBAK



ABSTRACT

This paper discusses the relationship between various procedures in Applied Kinesiology dealing with proprioceptive imbalances and the general techniques of Proprioceptive Neuromuscular Facilitation (PNF) as employed by physical therapists. Uses of these procedures to streamline both treatment and teaching of applied kinesiology are presented.

Proprioceptive neuromuscular facilitation (PNF) is a systematic approach to stretching and strengthening based on neurophysiology. The exercises are performed as to take advantage of the facilitation and/or inhibition of muscles that occurs naturally with motion. Using these procedures, exercises can be developed to increase either strength or flexibility depending on the needs of the patient. Brotzman states that "proprioceptive retraining involves sensory activation of the tendons, ligaments, capsules and muscles."

In applied kinesiology, Goodheart has developed examination and treatment procedures based on these principles. The original work of applying directional pressure to influence the basic function of spindle cells and Golgi tendon organs laid the basis for future procedures like reactive muscle patterns and "frozen" muscles. Another procedure that fits this overall pattern is the muscle weakness found in ligament receptor imbalances.

Muscle spindles are found within the belly of muscles and run in parallel with the main muscle fibers. The spindle cell mechanism senses muscle length and changes in length. It has sensory nerve terminals whose discharge rate increases as the sensory ending is stretched. This nerve terminal is known as the ANNULOSPIRAL ending, so named because it is composed of a set of rings in a spiral configuration. These terminals are wrapped around specialized muscle fibres that belong to the muscle spindle (INTRAFUSAL FIBRES) and are quite separate from the fibres that make up the bulk of the muscle (EXTRAFUSAL FIBRES).

There are two main types of intrafusal fibers, the NUCLEAR BAG and the NUCLEAR CHAIN. The nuclear bag fiber is so called because there are about 100 nuclei in the central region underlying the sensory nerve ending.

Another important feature is a motor supply to the intrafusal muscle. The intrafusal fibres are able to contract if their motor supply is active. The motor supply comes via efferent fibres that usually fall into the gamma classification of diameters. They are often referred to as FUSIMOTOR fibres.

Two actions can, in principle, cause the annulospiral ending to be stretched and so increase its discharge.

1. A stretch of the muscle as a whole will stretch the spindles within it, and thus the sensory endings.

2. Fusimotor activity will cause contraction of the intrafusal fibres below the fusimotor nerve terminals either side of the central region. This will result in stretch of the central sensory region.

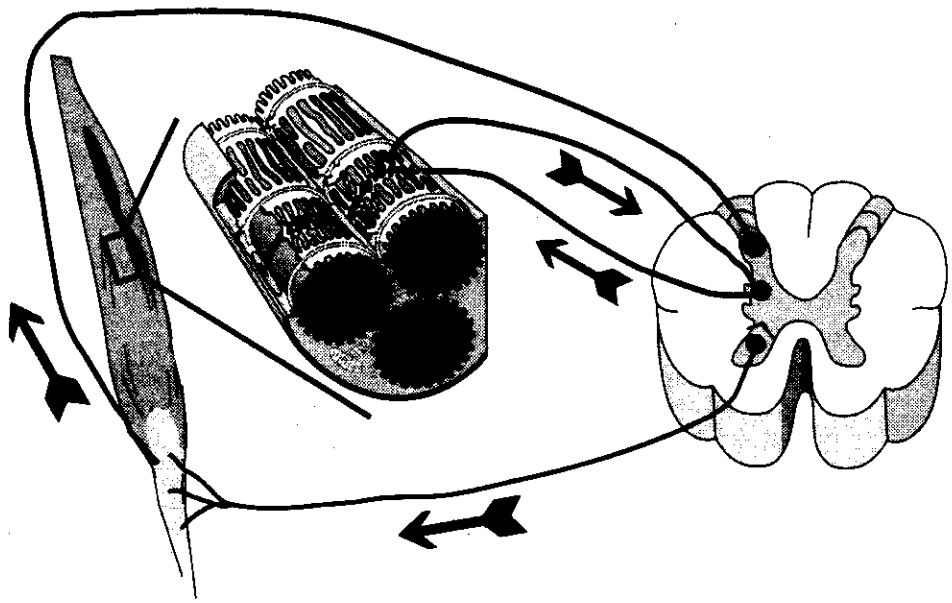
Nuclear chain fibers also have annulospiral sensory endings in the central region. It is a shared branch of the axon that supplies the central area of the nuclear chain fiber. This sensory nerve is of group Ia, the fastest found in the body.

Further out there are other sensory endings, more closely associated with the chain fibers. These fall into the slower group II division of sensory nerves and are referred to as SECONDARY endings in contrast to the centrally located PRIMARY endings.

The two types of intrafusal fiber, (bag and chain) have different mechanical properties, and respond differently to their largely separate fusimotor fibres. They also differ in respect to their sensory endings. Consequently, the information relayed to the CNS by the spindle via group Ia and group II sensory endings is different.

In utilizing the PNF procedures, the muscles are either facilitated or inhibited to perform their normal task. Imbalances in the facilitation and inhibition of the muscles are what we have described in Applied Kinesiology in muscle terms as Reactive Muscles and frozen muscles versus the general descriptive terms of weakness and loss of range of motion. The basic goal of the PNF procedure is to modify the discharge of the motorneurons. Originally, the procedures developed by Goodheart and then modified by Deal dealt with altering the relative length of the spindle cell.

The basis of PNF is that reflex spinal activity is used to either facilitate or to inhibit muscular response. To increase strength, the maximum number of motor units is stimulated to create an overflow of activity that spills over causing reflex facilitation of weak muscles. Simply, the strong muscles help the weak. In either facilitation or inhibition, the goal is to modify the discharge of the motorneurons. The stretch reflex, based on the spindle cells and the Golgi tendon organs (mechanoreceptors), is the basis of this procedure. Spindle cells increase the rate of contraction when they are stretched. If the contraction of the muscle continues and stretches the Golgi tendon organs, a reflex relaxation of the muscle occurs. In movement of a joint, the relaxation of the antagonist muscle to the contraction of the agonist is termed reciprocal inhibition. Contraction or prolonged stretching of the agonist muscle



Stretching a muscle increases the rate of impulses from the mechanoreceptors reaching the spinal cord. This increases the rate of motorneuron impulses returning to the muscle. Impulses from the muscle spindle will produce a reflex contraction of the muscle in response to stretch. If the stretch continues Golgi tendon stimulation will inhibit the muscle spindle response causing a reflex relaxation of the muscle. This is termed autogenic inhibition.

will cause inhibition of the antagonist. A quick stretch of the antagonist muscle will cause facilitation of the agonist muscle.

The practical discussion begins with a review of the stretch reflex. The stretch reflex involves two types of mechanoreceptors. These are the above described spindle cell and the Golgi tendon organ. Stretching of a muscle causes an increase in the frequency of impulses from the mechanoreceptors to the spinal cord. This causes an increase in the motor nerve impulses to the muscle. The spindle cells will cause a reflex contraction of the muscle due to the stretch. If the stretch continues, the Golgi tendon organs will fire and inhibit muscle spindle impulses causing a reflex relaxation of the muscle. This reflex inhibition of the muscle due to the stimulation of the Golgi tendon organs is termed autogenic inhibition.

Muscles do not move a joint in true flexion - extension or abduction - adduction. Rotation is involved in all joint actions. Basically, the procedure uses resisted motion to cause inhibition or facilitation to the needed areas. In all cases, instruct the patient to look at the body part being treated. When treating an extremity, motions that occur distally are completed first and the proximal motions throughout the range of motion.

Simple stretching and strengthening are accomplished by using motions as shown on the next two pages. These same principles can be applied to any joint.

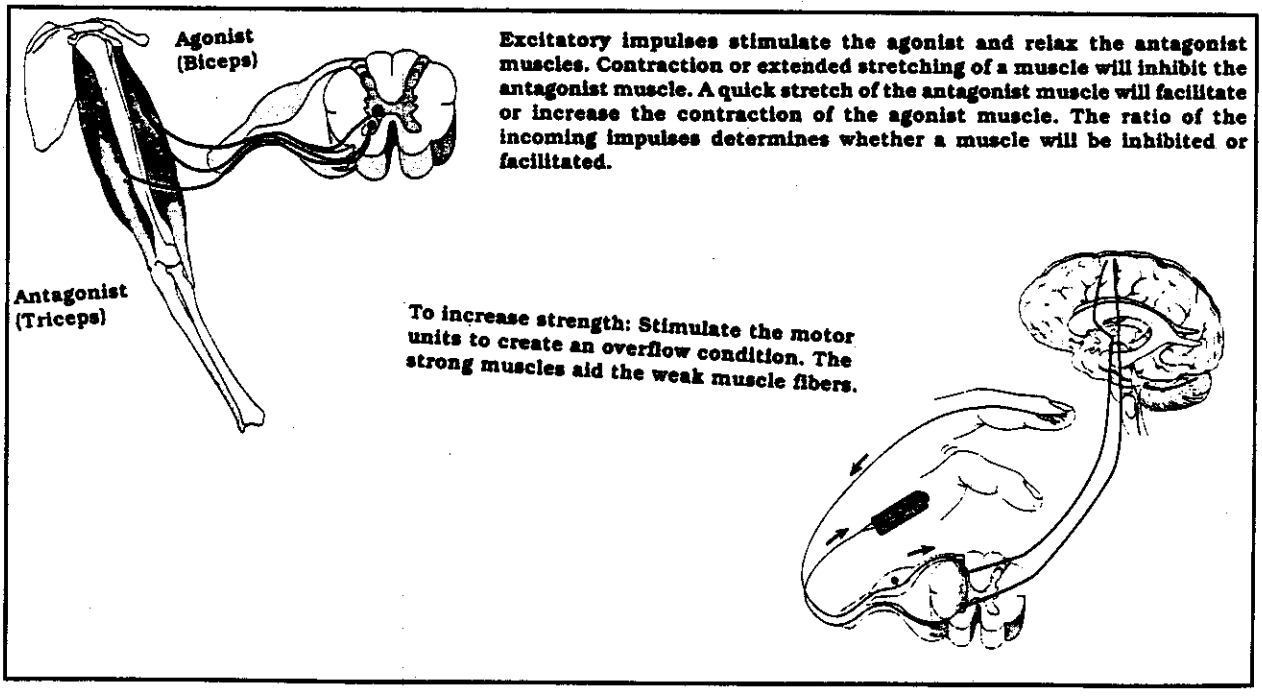
For weakness in a small arc of the joint, resist against the motion of the extremity until that area of the movement arc is reached. Then quickly stretch the muscle - joint and again resist against the motion.

Increased stability of a joint can be attained by rhythmically contacting with isometric contractions of the agonist and antagonist muscles. No motion of the joint is allowed to occur while these contractions are being performed.

Individual stretching can be done by resisting motion through a joint arc and then passively stretching the joint. This is followed by holding a position and having the patient contract the antagonist muscle. This is followed by contraction of the agonist while gentle stretching is applied to the extremity.

A simple procedure shows the relative advantage of these procedures.

1. Place your heel on the floor and measure the range of motion that you can internally and externally rotate the foot.

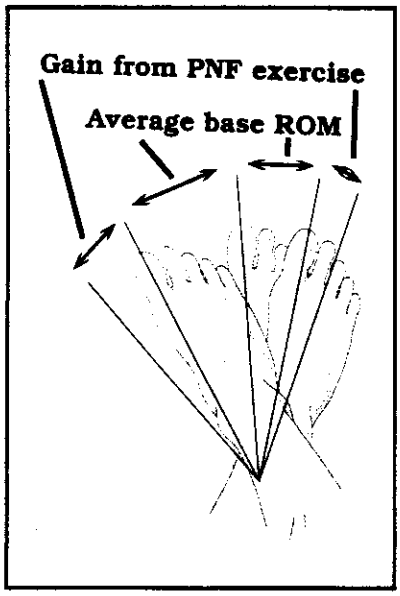


2. Place your foot in the testing position for the peroneus tertius muscle. Resist plantarflexion as the foot moves into the test position for the tibialis posterior. Immediately reverse the motion and resist dorsiflexion back to the peroneus tertius test position. Repeat the motion cycle four times.

3. Move the foot into the test position for the tibialis anterior. Resist plantarflexion as the foot moves into the test position for the peroneus longus/brevis muscle. Resist motion from this position through dorsiflexion until you reach the starting, tibialis anterior, test position. Repeat the motion cycle four times.

4. Retest the range of motion.

In a study done in the office 40 patients were tested and an average increase of 15 degrees internal rotation and 10 degrees external rotation was recorded.



The basic procedure is to resist motion through two planes that make an "X" through the axis of the joint. A diagram printed in Upledgers Cranial Sacral Therapy best shows the basic motions that are performed. During inspiration, the arms and legs are externally rotated and taken into extension and slight abduction. The opposite occurs on expiration. The arms are fully internally rotated with adduction and slight flexion. If these motions are considered along with the natural motions of throwing or kicking, the basic joint action can be duplicated with the patient.

For simple loss in range of motion or pain and weakness on motion, these motions are resisted. During the exercise, the breathing pattern of inspiration during external rotation and abduction is used. Conversely, expiration is employed during the opposite cycle. The patient should be instructed to watch the movement of the extremity while the exercise is being performed. This cycling of the body part is performed four times each pattern (two per joint). The spine is then tested for a subluxation or holographic subluxation at levels that are related to the joint in question.

To treat a weakness of a muscle in a small range of its arc of motion, resist the motion of the extremity as it approaches the angle where the muscle tested weak. At this level, have the patient repeatedly contract the muscle against resistance until the muscle fatigues and then perform a short quick stretch. The motion is then again resisted through the remainder of the range of motion of the extremity. Prior to treating, determine if a gait position negates the muscle weakness pattern. If this occurs, palpate for the indications of a spondylogenic pattern and after treatment to the muscle is performed correct the spinal imbalance found.

Summary

The basic procedures of spindle cell and Golgi organ corrections along with reactive muscles and frozen muscles are corrected by the basic PNF procedures. In fifty-five cases of shoulder problems, the patients were examined for proprioceptive imbalances like reactive and frozen muscle imbalances. In fifty-one of the cases, the basic PNF procedure corrected the imbalances found. This was followed by correcting related spinal imbalances. In the four cases that did not respond, the pattern that was found was opposite the normal basic body motions that the procedure is based on.

The procedures in applied kinesiology that involve correcting proprioceptive imbalances are best termed Proprioceptive Neuromuscular Procedures. Under this heading, the individual procedures developed by Goodheart, Deal and Schmitt such as reactive muscles, frozen muscles, and ligament techniques are included. While the basic PNF exercises correct most of the imbalances of the patient, an understanding of what procedures can be used will aid in the treatment of the difficult patient or athlete.

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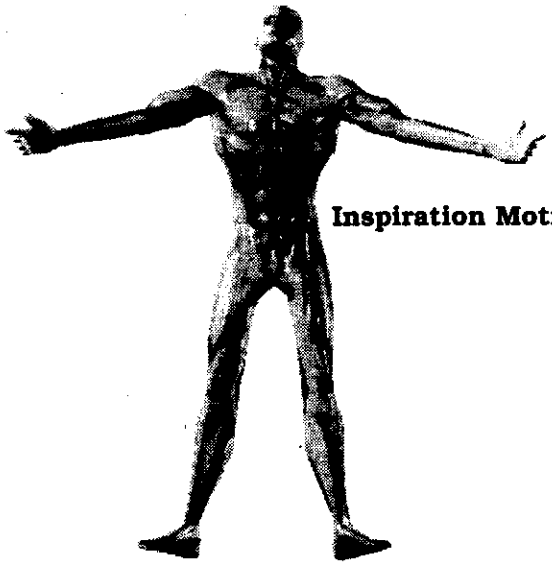
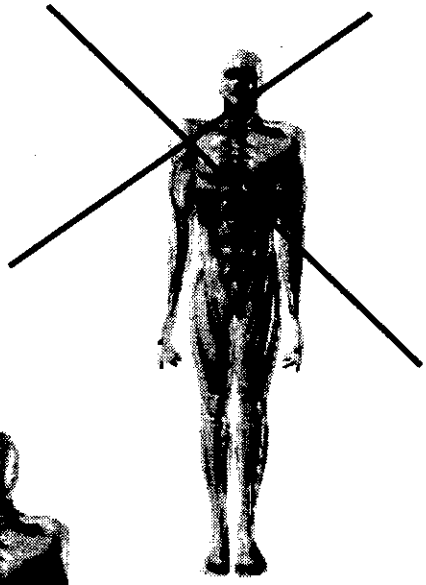
Expiration Motion

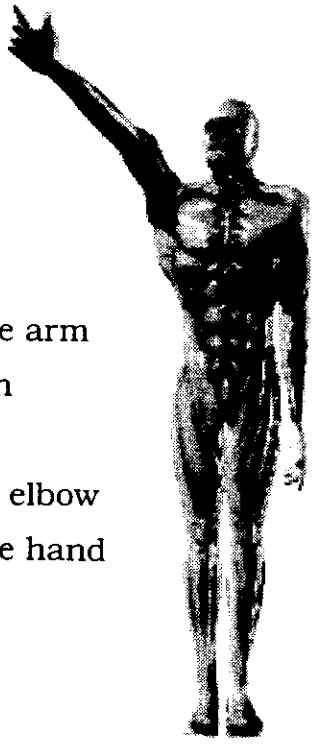


Inspiration Motion

Extension of the arm
External rotation
of the arm
Extension of the elbow
Supination of the hand

Flexion and
adduction of the arm
Internal rotation
of the arm
Flexion of the elbow
Pronation of the hand





Abduction and
extension of the arm
External rotation
of the arm
Extension of the elbow
Supination of the hand

Flexion and
adduction of the arm
Internal rotation
of the arm
Flexion of the elbow
Flexion of the arm
Pronation of the hand

SACRAL BLOCK TECHNIQUE

Craig S. Rubenstein, D.C.

ABSTRACT

The use of a single De Jarnette (SOT) pelvic block for improving spinal and cranio-sacral function, a common inhibited muscle pattern, challenge procedure, and pain indicators will be discussed.

INTRODUCTION

The use of this blocking technique for correcting sacral dysfunction has many effects. The effect upon simultaneous bilateral Psoas muscle function, anterior cervical pain over the anterior portion of the facet joints (medial to the SCM) as well as sacroilliac and lumbo-sacral function will be discussed.

This technique was developed after a discussion approximately six years ago with Dr. Vincent Esposito about the use of a small dorsal SOT block to correct sacral dysfunctions. (1)

DISCUSSION/PROCEDURE

After all other spinal, pelvic and Psoas muscle corrections have been made, testing (when not prohibited by pain) of both Psoas muscles simultaneously is performed. The doctor stands at the foot of the table, raising both of the patient's legs into position for Psoas muscle testing. The patient is instructed to resist your downward and lateral pressure. The patient is also instructed to stop if pain is created during testing. Inhibition of both Psoas muscles during the test is a positive indicator for the blocking procedure. It is very important to watch for patient recruitment; the patient will typically arch his back or lift his upper body from the examining table. If muscle testing is not possible due to pain or some other factor, challenge is applied to the sacrum. This is accomplished with the patient supine with both knees flexed and the feet resting flat on table. The doctor's challenge hand is placed under the patient's sacrum with the patient fully relaxed and all their weight resting on the challenge hand. A footward challenge to the sacral base is applied and a previously strong indicator muscle is tested for inhibition (a positive challenge).

Before proceeding with the technique, a ligament stretch reaction should be tested for. A slow stretch as described by Dr. Jerry Deutsch should be applied for a full five seconds to the lumbo-sacral and pelvic ligaments. (2) If the ligament stretch reaction is present, the blocking technique should not be performed until the ligament stretch reaction is corrected. The more traditional fast ligament stretch should also be tested for, but the procedure can usually still be performed if the fast ligament stretch reaction is present. The correction of the ligament stretch reaction may need manganese and/or adrenal support to ensure long term results.

The blocking procedure is done by placing the thin end of one SOT block pointing headward and centered under the patient's sacrum, while the patient's knees are bent; both feet are resting on the table. The palpation of the the middle to lower anterior cervical spine just medial to the SCM for a tender area, and/or an inhibited G-2 muscle (3) should be used as an indicator of proper block placement. The depth of the block should be changed until maximum relief of anterior cervical pain is accomplished or maximum strength of the inhibited G-2 muscle is obtained. After placing the block, wait approximately five seconds before reassessing your pain indicator. Usually starting with a minimal depth of the block and increasing the depth while monitoring your pain indicator, or G-2 muscle, is best. The time needed for correction will vary from about two to five minutes depending on the degree of dysfunction. After removing the block, retest your original indicator to see if a full correction has been accomplished. If the bilateral Psoas test is still inhibited this

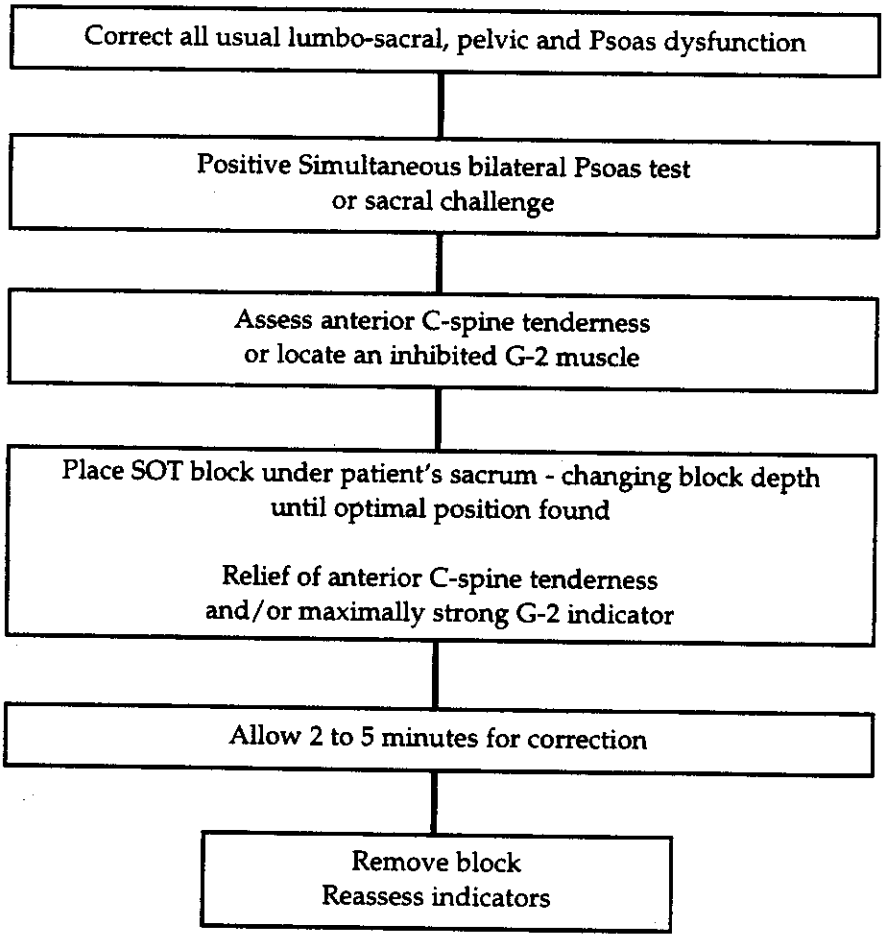
typically means there is still a lumbo sacral subluxation/fixation that was not previously corrected; reasess and make the appropriate corrections. At this point that blocking procedure may need to be repeated.

Typically patients with lumbo-sacral pain will find this block position very comforting, but if pain develops during the procedure, stop and reassess.

Conclusion

The technique has been very useful in many lumbo-sacral and cervical spine joint and disc syndromes.

Flowchart



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A Neurological Model for the Three Types of Muscle Testing

Walter H. Schmitt, Jr., D.C., DIBAK, DABCN

Abstract

A neurological model for the three variations of manual muscle testing, G1, G2, and G2 submax, is proposed. Each of these tests relies on the patient's ability to recruit an adequate level of alpha motorneuron (AMN) activity to resist an increment of force in the direction of eccentric contraction. It is proposed that G1 and G2 testing are dependent on the muscle spindle 1a reflex for their function whereas the G2 submax test is independent from the 1a response due to its association with nociceptive interneurons (INs). G1 weakness is associated with local reflexes from mechanoreceptors mediated by the gamma motorneuron loop. G2 testing is also mediated by the gamma motorneuron loop, but is associated with suprasegmental influences on the gamma motorneurons. G2 submax testing is associated with nociceptive reflex pathways. The G2 submax test may also be influenced by suprasegmental influences which are significantly different from those influencing the G2 test.

Introduction

In a previous paper on "Three Variations of Muscle Testing" (1) three types of muscle testing, termed G1, G2, and G2 submax, were defined and the clinical ramifications of each was discussed. This paper proposes a plausible neurological model for the nature of the three variant forms of the manual muscle test as performed by applied kinesiologists.

Discussion

Each of the three types of muscle testing responses is measured by the patient's ability to resist an increment of examiner's force in the direction of eccentric contraction. Each type of test differs in the amount of preloading the patient is allowed prior to the addition of the eccentric testing force. Descending conscious efforts by the patient in response to the eccentrically placed force create inputs to the spinal cord which can be considered a constant in the manual muscle test. Any changes in muscle strength of the nature which we see in A.K. are related to the eccentric portion of the test. Therefore, it is the affect primarily on the alpha motorneurons (AMNs) of that muscle that is being measured as "strong" or "weak." (The gamma motorneurons (GMNs) by themselves are not able to produce enough force to affect the type of testing changes that we perceive.)

So when there is a G1 weak muscle, this suggests that the central integrative state (CIS) of those AMNs is inhibited in spite of the conscious descending excitatory inputs present which we are considering a constant from muscle test to muscle test. Performing a G1 test causes a stretching of muscle spindles which should excite the AMNs and tend to reinforce the descending conscious inputs to the AMNs for that muscle. With the exception of the primary muscle spindle 1a monosynaptic pathway, we know that mechanoreceptor (MR) activity at the spinal cord level affects muscle function through INs which affect the gamma loop. MR reflexes do not affect the AMNs directly, but affect muscle function through the GMNs and the gamma loop. (This is in direct contrast to nociceptors which synapse on INs which affect the AMNs directly and bypass the gamma loop.)

So when a muscle shows a G1 weakness only, we can assume that the muscle spindle (which is being stretched from the onset of the test) is not adequately firing through the monosynaptic 1a pathway to the AMNs to reinforce the constant conscious descending facilitation of the AMNs adequately to overcome the examiner's force. In a G1 only weakness, this is because the local CIS of the GMNs is being inhibited from the segmental MR inputs (eg., subluxation, active NL reflex, etc.) This GMN inhibition results in a laxity (lengthened position) of the intrafusal fibers and slack in the muscle spindle, hence a lack of responsiveness to the stretching of the muscle as the test is initiated. There is a lack of reinforcement via the 1a reflex pathway to the AMNs which are thereby unable to keep the muscle firing up to the demands of the test. Thus, a G1 only weakness is present.

A G2 weakness, then, is an inhibition of the AMNs even when the gamma loop is allowed to be fully facilitated by conscious descending pathways (both the constant pathways which always fire during any type of muscle test AND the additional pathways which are facilitated when the patient is allowed to recruit them during the isometric phase of the test.) In other words, many descending pathways (reticulospinal, rubrospinal, corticocerebellovestibulospinal, etc.) are recruited and activated when the patient is requested to perform a G2 test. These pathways all work through the gamma loop (and some also affect AMNs directly.) A source of inhibition (e.g., autonomic, endocrine, cranial faults, TMJ, etc.) to one or more of these pathways to the gamma loop results in an inhibition of the gamma loop, hence inadequate reinforcement of the 1a pathway during the G2 test and a weakness response to the examiners added eccentric force at the end of the test. This is the same type of thing which happens in a G1 test, but in a G1 test, the GMNs are being inhibited by local MR reflexes, whereas in the G2 test, the GMNs are being inhibited by a descending suprasegmental pathway.

Descending suprasegmental pathways mentioned above which make up part of the corticofugal muscle activation system and operate through the gamma loop are at the mercy of interfering inputs from the hypothalamus, emotions, vestibular equilibrium system, etc. The effect form these interfering inputs will be that maximum cortical activation of these corticofugal pathways will be short circuited and result in inadequate activation of the GMNs and the gamma loop. Hence the 1a pathway will not be able to respond adequately to the stretching demands at the eccentric part of the muscle test and the G2 test will be weak.

The G2 submax test is a different story once again. We know that the G2 submax weakness is associated with nociception activity. We also know that nociceptors affect the AMNs through INs directly and bypass the GMNs and the gamma loop. This pathway is known as the flexor reflex afferent (FRA) pathway and the FRA IN group is sensitive to other segmental inputs besides nociceptors (in fact to A beta as well as A delta and C afferents.) We will just concentrate on the nociceptors for the moment.

If a G2 submax weakness is present, the FRA INs, (presumably in lamina VI and the intermediomedial group of lamina VII) are being activated for the FRA response by the nociceptors. These FRA INs both excite and inhibit both flexors and extensors by the flexor withdrawal reflex, the reciprocal extensor inhibition, and the crossed extensor reflexes which affect both flexors and extensors. This FRA IN pool is a major way station for various descending pathways on their route to effect affect AMNs. It is these FRA INs which are presumably impacted by immune and visual reflex imbalances transmitted via the medullary reticulospinal tracts (MRST).

G2 submax weaknesses are a result of activation of inhibitory INs which are part of the FRA reflex pathway from nociceptors. These INs pass directly to AMNs and bypass the GMNs and the gamma loop. Nociception is also transmitted to the caudal reticular formation (CRN) where it reflexly, via the MRST, descends in the dorsolateral fasciculus to inhibit the effects of incoming nociception

at several spinal cord areas throughout the length of the spinal cord.

The reason one may show a G1 and a G2 but NOT a G2 submax weakness is, if there are no local FRAs active, if the MRST is functioning normally (from normal brainstem, hypothalamic, and cortical inputs) this pathway will be recruited in the muscle test to fire the FRA IN pool for the muscle in question which fires directly to the AMNs bypassing the gamma loop. So this powerful input to the AMNs is enough to override the lack of stimulation from the 1a reflex, at least at the level of force required to overcome the G2 submax test.

When a maximum amount of force is necessary as in the G2 test, all AMN activity must be recruited which requires the recruitment of the gamma loop. That explains why the more forceful G2 test could show weakness while the less forceful G2 submax would test strong.

Updated Clinical Implications

Rubbing or stroking the skin over an area of injury activates MRs which block nociceptive afferents and strengthen weak muscles which are due to the nociception. In the presence of a nociceptive barrage, the muscle will demonstrate all three types of weakness to testing, but especially the G2 submax type weaknesses. The doctor can confirm the nociceptive source of muscle weakness by activating skin MRs (i.e., by gently rubbing the skin over the injured area) and observing a strengthening response of the previously weak muscle.

In contrast, pinching over an area of injury, recent or ancient, may also create a strengthening effect of all three types (or at least the G2 submax) of weaknesses due to excitation of medullary CRN reticular formation neurons which were previously being inhibited from some other source. This is the key to understanding the nature of G2 submax weaknesses.

Pinching activates the nociceptor spinoreticular MRST reflex pathway to descend and inhibit incoming nociception, in a similar but slightly different manner as the local MR effect.

The MSRT, affecting the same INs as the MRs, is also responsive to hypothalamic reticulospinal influences which (presumably) include the effects of immune system related effects in the hypothalamus. These immune system problems (presumably) can be separate from other hypothalamic reticulospinal influences which are mediated through the mesencephalic parabrachial nucleus pattern generator neurons which affect pontine reticular formation neurons. These neurons are the origin of the pontine reticulospinal tract (PRST.) The PRST neurons synapse on GMNs (and AMNs) but primarily rely on the gamma loop, hence the effect of inhibition in this pathway results only G1 and G2 maximum weaknesses.

Therefore, it is proposed that an immune system problem registers in the hypothalamus which affects descending hypothalamic MRST pathways which affect INs which directly affect AMNs (no GMNs) which causes G2 submax type weakness. When pinching an area strengthens a G1, G2, and G2 submax weaknesses, set point technique (or nociception stimulation blocking technique if the injury is acutely painful) over the pinched area will correct the weakness pattern.

CONCLUSIONS

The application of a comprehensive neurological model for applied kinesiology muscle testing procedures serves three purposes. First it forms the basis of hypotheses for research into the mechanisms of our discipline. Secondly, it provides a framework for the most appropriate application of the various clinical techniques which comprise applied kinesiology. Thirdly, it provides a basis for further development of new and improved techniques for improved patient care.

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WHERE IS THE TRIAD OF HEALTH?
Pathfinding in the Nervous System

Walter H. Schmitt, Jr., D.C., DIBAK, DABCN

ABSTRACT

The paper proposes that there is a clinical reality represented by the philosophical triad of health suggested by applied kinesiologists. Systemic structural, chemical, and mental-emotional factors are all mediated through neurons in the mesencephalic parabrachial nucleus, an area which when excited, creates preprogrammed patterns of movement vial descending reticulospinal pathways.

INTRODUCTION

The structural-chemical-mental triad of health is a fundamental concept on which the practice of applied kinesiology (A.K.) is based. Is the triad more than merely a concept? Can the structural-chemical-mental factors which affect a person's health actually be transmitted into the muscular system where they can be measured by manual muscle testing? Do these factors merge in a systematic, logical manner? Is there a place in the nervous system where the triad of health exists?...

DISCUSSION

In the parabrachial nucleus (PB) in the mesencephalon reticular formation (near the brachium conjunctivum, the superior pathway into and out of the cerebellum) are located groups of cells which are "neurological pattern generators" (NPG). These NPG, when stimulated, send efferent signals to groups of cells lower down which cause specific patterns of movement to take place. For example, turning about the midline, flexion-extension, and gait type patterns are examples of whole body patterned movements which will be activated with the NPG cells' fire.

The PB NPG causes these patterned movements by sending descending efferent signals to neurons in the pons and the medulla reticular formations which give rise to the descending reticulospinal tracts (RSTs). The RSTs descend to all levels of the brainstem and the spinal cord and, through interneurons, they affect alpha and gamma motorneurons which affect muscle function. (The RSTs also synapse on intermediolateral (IML) neurons which are the primary autonomic efferent neurons.) Therefore, activation of PB NPG neurons potentially have facilitation and inhibition effects on muscles throughout the body (as well as autonomic function throughout the body.) These pathways certainly have a major impact on the muscle testing outcomes which A.K. doctors measure.

Where is the triad of health located?

The PB NPG receive direct afferent input from:

1) The cerebellum (Structural). The cerebellum receives and synthesizes proprioceptive inputs from the entire body. The cerebral cortex (Mental) also sends messages to the cerebellum for synthesis with other cerebellar inputs necessary for smooth muscular function.

2) The hypothalamus (Chemical). The hypothalamus is the major neurochemical transducer of the body. Major body chemistry reactions are converted into neural activity by this center.

3) The hypothalamus, again (Mental/Emotional). The hypothalamus receives emotional outflow which it transmits onward as muscular and autonomic outflow.

4) The basal ganglia (Mental). The globus pallidus is the synthesizer of basal ganglia activity (from the cerebral cortex, the brain stem, as well as from the other basal ganglia nuclei, the caudate and the putamen.)

Structural, chemical, and mental activities in the nervous system all converge on the PB NPG cells where they are further sent through the RSTs to muscular (and autonomic) motorneurons in the brainstem (for cranial nerves) and spinal cord. The PB NPG cells are the place in the nervous system where systemic structural, chemical, and mental-emotional factors converge and are sent onward with consequences for muscular activity and A.K. muscle testing outcomes.

Conclusions

I propose that neurological substrate for the triad of health is located in the NPG cells in the parabrachial nucleus of the mesencephalon. As our paradigm of A.K. as functional neurology evolves, we can use this hypothesis as an integral part of our model.

CLINICAL APPLICATIONS BASED ON A NEUROLOGICAL MODEL

Walter H. Schmitt, Jr., D.C., DIBAK, DABCN

ABSTRACT

Clinical step-by-step procedures are presented based on a model of applied kinesiology (A.K.) as functional neurological evaluation. The neurological model predicts a hierarchy of A.K. procedures, that is, which should be checked for and corrected first, second, third, etc. in order to provide the most efficient and effective approach to restoring a patient to optimal function.

INTRODUCTION

This paper is based in part on principles presented in two companion papers in these Proceedings entitled, "Where is the Triad of Health?" (1) and "A Neurological Basis for the Three Types of Muscle Testing." (2) The material presented below represents practical applications of some of those principles. It employs the concept that there is a hierarchy of function in the nervous system, and that following this hierarchy leads one to the most efficient, hence most effective therapeutic approach.

There are logical clinical applications which may be derived from the neurological model for muscle testing as functional neurology. This paper is based on my personal observations (not opinions) and understanding of neurological function. It explains step-by-step procedures which should be evaluated for the most effective care of a patient's problems. It is synthesis of techniques developed by this author and others based on what is predicted by the neurological model. The name of the doctor(s) who described each technique is in the reference section.

Too often, our treatments are out of sequence, neurologically speaking. When we fix something, it is like painting over rust. Or even worse, our corrections sometimes only serve to move a problem elsewhere, trading one adaptation for another. This is true for all health care professionals, not just AK doctors. Following a neurological model avoids this common pitfall.

There are a number of other steps which could be added in their order of neurological impact. This paper addresses the value of adopting and employing the neurological model as a standard. Suppose someone says that the most important thing to check first is to place a dead fish on the patient's chest and test a weak muscle for strengthening. Who knows, maybe this is of utmost importance.

With the neurological model in hand, the way to evaluate this claim is to check for the step-by-step items without correcting anything. Then, place the fish on the chest and do the technique. Then recheck the steps. Ask what did the dead fish technique fix and what did it not fix? You can test the significance of any new technique in this manner. More importantly, you can place it in its proper neurological hierarchy in relation to all other techniques. You can also test in the laboratory once the clinical model has revealed the neurological level of the lesion.

Of course, not every patient presents with all of the problems listed below, but the "screening tests" listed can rapidly guide you to the neurological level of the functional lesion. Once the level of the lesion is identified, various corrections may be effective.

DISCUSSION

STEP 1

Screening test: Weak muscle is tested with G1, G2 submax, and G2 to maximum tests.(2)

Significance: This suggests which group of neurons in the spinal cord is being inhibited. This has major significance as to what the next step should be. But for this discussion, let's just say that all three types of weakness are present.

Treatment: Further evaluation is necessary.

STEP 2

Screening test: Autogenic Facilitation.(3) Stretching the muscle spindles apart should cause a strengthening of all three types of weakness.

Significance: The withdrawal response from an injury is so significant that it affects alpha motorneurons, bypassing the gamma motorneuron loop. This means that, if there is a weakness from an injury source, no other therapeutic messages will be able to affect that pathway until the memory of the injury is eliminated. These must be corrected first for anything to be effective.

Treatment: Muscle Chain Response (Injury Recall) Technique (4) or Set Point Technique (5) or Nociceptor-Stimulation Blocking Technique (6) necessary to erase "muscle memory" reaction to trauma and restore autogenic facilitation to normal.

STEP 3

Screening test: Coccyx TL strengthens a weak muscle; or cross crawl or homolateral crawl strengthens a weak muscle.(7)

Significance: I have observed that there is a direct correlation between TLing the coccyx and activation of the mesencephalon reticular formation neural pattern generators (NPG) by cross crawl or homolateral crawl. The impact of either of these screening tests is that their correction involves treatment of the endocrine system, ultimately affecting the hypothalamus. When endocrine imbalances exist, they affect muscle function via the hypothalamus through the NPG in the parabrachial nucleus. The hypothalamic pathways to the spinal cord go through these NPG (hypothalamoreticulospinal tracts.) Any other attempts to restore normal function when there is an underlying endocrine imbalance will be overridden as soon as the person gets up and moves if these pathways are not corrected first. In this case, it appears that lateral spinal flexion patterns (from centering the spine concepts) will cause coccyx TL to also weaken strong muscles. This helps in guiding you to the organ to treat. Following correction, the coccyx does not TL. Neither do cross crawl nor homolateral crawl strengthen the weak muscle.

Treatment: Treat endocrine NLs. I challenge the NLs with stressors (sugar, caffeine, sodium, etc.) and then correct with IRT. There may be other ways of achieving the same thing. An important point here is that there may be endocrine excesses with the absence of associated muscle weakness. That is why these other screening tests are so important.

STEP 4

Screening test: TL emotional NVs. Emotional recall causes general weakness.(8,9,10,11,12) When the emotional NVs TL, repeated spinal flexion-extension patterning (like mild rocking back and forth) for five or six sequences will also strengthen the weak muscle.

Significance: Emotional recall which creates a general weakness must affect reticulospinal pathways since the reticular formation nuclei are the only known places where general muscle inhibition patterns can originate. We know that emotions affect the hypothalamus which then projects to the spinal cord via the NPG and the hypothalamoreticulospinal tracts. These pathways pass through the NPG area. Consider that the fight or flee reaction or the rage reactions generate a spinal flexion pattern ("the scared cat") which is the obvious outward manifestation of activation of this pathway. The flexion-extension exercise is just another way of demonstrating that the NPG are implicated in emotional recall responses. Once again, these must be corrected first or other corrections will be overridden as soon as the patient gets up and moves, or has another stressful thought.

Treatment: Any and all of the techniques developed by Goodheart, Walker, Callahan, Durlacher, Lebowitz, Schmitt and others.

If we clear the pattern generators from endocrine or emotional NV corrections, we may still be left with a G2 weakness. If so, we know it must be from another descending pathway. It is probably not from the MRST since we have already corrected that, or parabrachial generated PRST or MRST pathways since we have corrected those as well. It could be from cranial mechanism or TMJ. Or, it could be vestibulospinal, as in TLR.

STEP 5

Screening test: Pretest Imaging (13), Other Cranial screen tests. (14)

Significance: If pretest imaging is positive, the significance of cranial correction is obvious. Any volitional movements on the part of the patient will be potentially short circuited in light of this finding. We know that any cranial techniques will be mediated through sensory portions of cranial nerve V. As we consider the hierarchy of the nervous system, it is important at this time to normalize feedback from this most important sensory distribution whose afferent components synapse all the way from the mesencephalon to the upper cervical column.

Treatment: Cranial techniques including IRT for cranial bones.

STEP 6

Screening test: TMJ Therapy Localization

Significance: Everyone has experienced the wide ranging clinical impact of TMJ correction. Systemic efferent effects of the TMJ might be related in part to the rubrospinal pathway to flexors, since it is involved in flexion responses with anger, rage response, etc., and because of the motor interneuron pools it impacts.

Treatment: Correction of TMJ by standard AK techniques. When TMJ problems recur, consider that the TMJ is part of the first stage of digestion. Many TMJ A.K. indicators of a TMJ problem will be negated by TL to digestive system reflexes suggesting that these TMJ problems are adaptive to problems elsewhere in the digestive tract. In these cases, therapy should be directed both at the TMJ and the malfunctioning organ.

STEP 7

Screening test: Does the weak muscle strengthen (G1, G2) with expected tonic labyrinthine reflex (TLR) patterns?(15)

Significance: We have already dealt with endocrine system in Step 1 from the point of view or overactive steroid or thyroid activity. But if you have a G1 and G2 weakness at this point and you turn the head and it does not strengthen as expected on both G1 and G2 tests, go to the endocrine NLs. At this point in the process, a TLR problem seems to be suggestive of a low endocrine problem, rather than a high endocrine problem as in Step 1. It is possible that the same organ is both over stimulated and under functioning, hence will show up as positive in both Steps 1 and 7. Even if the same gland was over before because it was being driven, it may now need to be treated as under.

Treatment: Rub endocrine NLs. Monitor temperature increase to determine length of treatment at this point. Supplement as indicated by oral nutrient testing.

STEP 8

Screening test: TL both K27 points.

Significance: K27 switching is related to uncoupled spinal mechanics, especially at the upper cervical area. The local intrinsic muscles are being driven by multiple masters. At this point in the process, factors such as TMJ and cranial faults which create uncoupled cervical motion will have already been cleared. Uncoupling, hence K27 TL, now usually arises from things like spinal reflexes like Lovett brother patterns. The Lovett brother vertebra is often itself in an uncoupled subluxation pattern. This is usually due to the vertebra's intrinsic muscles responding to local visceral reflexes, like large intestine driving L5 and L5 driving C1. The pattern can often be traced through the nervous system as in the following example. An uncoupled C1 driven by a C7 that was a response to a T12 (Lovett brother) that was related

to its sclerotome and was corrected by IRT to the iliolumbar ligament (T12 sclerotome). These are all spinal cord reflexes, modulated by the cerebellum, which is probably why you see G2 (or G2 submax weaknesses here if there is a local pain pattern).

Treatment: Correction of the source of uncoupled motion by adjustment, organ treatment, or IRT depending on what is found.

As you are reading this you may have asked yourself, "But what about K27? Shouldn't that be corrected first? What about cranial technique? What about the TMJ? Aren't these very important? Shouldn't they be checked and fixed first?" These are the right questions to be asking. The neurological model answers all of these questions derived from our varying personal clinical experiences.

K27 switching, for example, may be eliminated by any of the steps 2 to 4. It is also often eliminated by cranial technique. (16,17) Each of these techniques has its own place in the neurological model, and in the hierarchy of neurological function. The fact that cranial technique (and/or one of steps 2 to 4) can eliminate K27 means that we can save ourselves a lot of time by checking and fixing cranial faults (and these other steps) prior to ever checking K27. Our neurological model must reflect that, and it does. So everything we do has parallels between the clinical and neurological model components.

This perspective solves a lot of problems with new ideas and explains why they work for some and not for others. It depends on what else is going on in that patient whether the technique will be effective or simply result in painting over rust.

We CAN know these things and we should know these things because we are the ICAK and we are the authorities on A.K. When Jeff Bland comes up with a liver detoxification approach, or when Ted Carrick comes up with neurological coupled adjusting, or when someone presents a new hand mode, or when some network marketing company wants to sell us colloidal silver, or whatever, we can test the claims against such a neurological standard and level the playing field for comparison's sake. Sometimes one technique works just as well as another. Sometimes not. But until we can get a good foothold on the neurological impact of what we all do, we will never have a chance of knowing that.

CONCLUSIONS

What we have learned from using muscle testing as functional neurology is not difficult. It is just new.

This paper has presented an example of how we may use the neurological model to unify A.K. and synthesize everyone's favorite techniques. Further, with the use of the neurological model, new ideas can be compared to the model to identify where they fit. This comparison will help doctors to decide which of several methods they may use to accomplish the same things.

The model will also serve as a basis for testing itself and our clinical techniques. As future electrophysiological research is available, we may be able to prove or disprove the hypotheses presented by the model and evaluate our techniques, one by one, against these technologies. But first, we must know where to start looking. The model gives us such a starting place.

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AFFIRMATIONS IN AN A.K. PRACTICE

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ABSTRACT

An affirmation can be used to "therapy localize" the psyche. This paper will explore the use of verbal statements to pick apart the unconscious limiting patterns that underlie the structural and chemical imbalances we attempt to correct on our patients. The principles relating to the different statements will be discussed. Although many approaches are available to correct the imbalances brought out by these affirmations, a simple corrective procedure will be offered.

INTRODUCTION

This paper will explore methods to test and treat the psychological side of the triad of health. The use of verbal statements in applied kinesiology is not new. Roger Callahan first wrote of the use of "psychological reversal" techniques.(1) James Durlacher has written an excellent book, Freedom From Fear Forever(2), which expands on Roger Callahan's original ideas. Scott Walker has taught our profession much about emotional balancing through his N.E.T. procedures.(3) These are excellent techniques and will often be all that is needed to correct many problems. The purpose of this paper is to investigate the deeper parts of the unconscious and subconscious minds of our patients (and ourselves). What will follow is the result of observations from my own introspective work and my work with patients. There are many ways to interpret the way the mind works and I offer this paper as only one way of viewing things. The affirmations that follow do work however, and they should be used in a way that fits with each person's personality and practice. We spend much of our attention with patients on balancing the neurology, structure and chemistry. Often the psychological leg of the triangle gets limited evaluation. Using the emotional neurovasculars is a very useful technique, but it does not change deep psychological programming. This paper will delve into the person behind the nervous system, the one who lives in the body on which we are working.

Many affirmations that will be discussed were developed from working with incest survivors, victims of different types of traumas, people in unhappy relationships, people who have lost loved ones, people who are working on various issues with their counselors and people who just want to further their inner development. This includes most of our patients! This type of treatment is not intended to be a substitute for good counseling and psychotherapy. On the other hand, it will enhance good therapy and allow the person to make much more rapid progress. Both the patient and the counselor will appreciate the breakthroughs that will come from this type of work.

Affirmations or positive statements have been used in applied kinesiology for a long time. This paper will explore the importance of linguistics when using affirmations. Sometimes the use of affirmations is ineffective or inadequate to solve certain problems. This is usually due to the way the affirmation is phrased, so that a deep enough response is not elicited from the patient. Affirmations are not always the best approach to address all psychological issues. Sometimes in a clinical setting having a person visualize a stressful situation is easier or more appropriate. Treating this way will often provide great relief and will clear the weakness indicators. There may not always be enough time or the proper rapport to do the work described in this paper. The use of a specific affirmation or statement, however, will often address a part of the psyche that a person cannot visualize on his own. He can visualize or recall events, emo-

tions, reactions, etc., but the unconscious motivating factors usually remain hidden from view. These procedures will work well with visualization techniques and often at the same time. For instance, have the person visualize the stressor while vocalizing an affirmation.

Discussion

Let us begin with a brief discussion about the mind. Many theories and philosophies exist about how the mind works. Even with all the research that has and is being done, science has just scratched the surface of this vast topic. The mind is multi leveled or multidimensional. The conscious, subconscious, unconscious and supra conscious aspects of the mind all play parts in the creation of health and disease. Every cell has mind in it. The nervous system is the relay mechanism of intelligence, but it is not the intelligence. Much of our intelligence is a product of our genetics, environmental programming, diet, structure and so on. But, there is also a part of us that is intelligent beyond the body. Someone is living inside this complex sensorium. When we muscle test our patients, we are talking with aspects of their mind via our testing of the nervous system. However, the question becomes, what part of the patient is giving us the information? An even more important question is, what part of the patient is not speaking to us that we need to hear from? To some degree, most people are in denial about their illness or injury. This is not a conscious decision as much as a protective and adaptive mechanism. Adaptation is like throwing someone overboard to stay afloat. Something is lost in the attempt to stay afloat. One way we deal with stress is to store the most painful memories just out of reach of the conscious awareness. We posture ourselves away from the pain and discomfort. Eventually we become accustomed to the imbalance as if it is normal. Most of these adaptations are learned early in life. We observe how the adults around us cope with and compensate to stressful situations. Then we incorporate this knowledge into our own way of being. In an attempt to look good to the world and ourselves, we learn to rationalize our feelings and hide our true reactions to life's experiences. Our job is to help people find out how they have compensated and to restore the balance that was lost.

We cannot keep every experience that we have ever had in our conscious memory so the unconscious part of the mind stores all of that information. The painful parts are generally stored in the subconscious part of the mind. The subconscious mind is under the surface of the conscious mind and is generally not as accessible to us. The subconscious mind is a subset of the unconscious mind. Generally we live in the upper outer aware part of our mind where everything seems in control. Much of what is behind a person's illness or imbalance is just out of reach of his conscious awareness. When we expose it with a verbal affirmation and provide some correction, he often acknowledges the truth of what is going on inside. Much more could be said about the functioning of the mind. However, the important point to remember here is that we want to expose the unconscious or subconscious motivating patterns and attitudes so that we can free the nervous system from the stress of hidden memories. Tremendous healing and creative energies are released when these old memories and scars are resolved.

When using affirmations with patients, I start by telling them that their body and mind are connected (until death do they part) and that everything that they have ever experienced has had an impact on their body. Furthermore, whatever they have not resolved in their experience, is stored in the body as distortion. We all need certain psychological nutrients from our parents and environment as we mature. Often the nutrients of love, self acceptance, respect for others, feeling loved and important, patience, etc. are replaced with fear, a poor self image, lack of respect for the feminine, guilt, etc. The body develops with weaknesses and deficiencies just as if there was a shortage of a vitamin or mineral. This may manifest as facilitated neurological pathways, poor posture, blocks in the flow of the chi, faulty digestion or liver metabolism and so on. This is not news to applied kinesiologists. If we listen to our

patients, ask them certain questions and observe the way they relate to their illness, their spouse or to us, we will have a great insight into the deeper pathways that allow their illness to manifest. As a rule, I do not use affirmations on a patient for the first 2-4 visits. The first several visits are required to get to know the patient, gain his confidence, and to balance the basic structural and nutritional faults. This provides a foundation for deeper work. When a problem does not improve through standard means, then a psychological approach is one of several other necessary investigations. People are generally quite happy to schedule longer appointments for this type of treatment.

TESTING

The procedure for testing the psyche is not new. Challenge an intact muscle and then have the patient vocalize a positive statement such as, "I am curious why my knee won't heal." If the statement is true, then the muscle challenge should remain strong. If the statement is not 100% true (as opposed to telling them that it completely false) then weakness will occur. Roger Callahan termed this phenomena a psychological reversal. It brings an unconscious pattern to the conscious awareness of the nervous system. Maintaining the body's focus on the weakness that results when a psychological reversal is exposed is necessary. Dr. Beardall's leg lock technique works well here. Starting with the feet and legs together abduct the legs to shoulder width apart. Another method is to tap lightly on the glabella. Both techniques focus the nervous system on the problem. If we do nothing to tag the problem, then the weakness quickly disappears or becomes readapted and nothing can be corrected.

TREATMENT

Many types of treatments can correct the weakness that results from this type of test. Any "fix what you find" approach is fine. The use of acupuncture point tapping, set point tapping, or the vertebral adjusting of N.E.T. is fine, provided the indicator clears. It is my observation, however, that the following technique works the most effectively. It is quick, simple and quite effective. First, have the patient say the affirmation and observe the weakness that results. Have him abduct the legs to hold the body's focus on the pattern. Then therapy localize the skin on the posterior cervical spine for an area that negates the weakness. This area of therapy localization that negates a previous TL is called a "two point". Have him repeat the leg lock (together and apart) while holding the TL to the positive area on the neck. Now is a good time to do a quick scan of the body to see what area or system relates to this pattern. Check the set points for major endocrine and digestive organ stress, and scan the spine for vertebral involvement. This is more for information than treatment, although treatment to this area is quite possible and usually effective. Demonstrate to the patient the area that needs correction. For treatment, scan over the skull for an area that TLs . This is called a "three point", or the third TL in a sequence. Tap lightly several times on this area and the correction will occur. Retest any area involved and retest the affirmation. Occasionally an affirmation will need to be repeated several times. Sometimes where there is a very deep and involved pattern, the same affirmation might need to be repeated 10-15 times. Treat each time with a TL to an area on the posterior neck and then tap an area that TLs on the skull. A change occurs within the dura or CSF with this correction. However, the exact mechanism involved in this correction is not fully understood. This simple and quick correction works well with almost any imbalance. Subluxations, cranial faults, categories and neurolymphatics all respond well to this corrective procedure. When this procedure is not appropriate, there is no two point on the skin of the posterior neck. In these instances use Dr. Schmitt's injury recall technique (IRT)(5) or a more direct correction.

Once an affirmation is balanced, it will not test positive again. However, the affirmation can be changed slightly in many ways to bring out more imbalance. For instance, have the person visualize a different stressor, a different aspect of the same stressor, or have him therapy localize a specific organ while saying the affirmation. The most common response

from this type of treatment is that the image of the problem or stress begins to become vague in the person's mind. They begin to have a hard time visualizing the person or situation that was quite painful the previous moment. It seems to move away from them and the image appears at a distance. Once the problem stops facilitating his nervous system, it no longer seems so close and personal.

Often, after a series of affirmations and corrections around a specific topic or series of related issues, the last treatment needed will be a category two correction. This is usually my stopping point. An affirmation series will often show the need for treatment to different organ reflexes moving around the body, with occasional emphasis on one organ. Spinal segments may be involved and so on. The last correction, however is usually the category two (correct with the two point to the neck and light tapping on the skull). Occasionally a category one correction follows the category two. Once the pelvis is set, the patient has a new foundation from which to work. Start a different line of investigation or end that session.

Discussion

Several basic principles about using affirmations need to be understood. First, these affirmations may be used in many, different ways. Change them based on your own preferences, results and of course what is best suited to the particular person. Words are very powerful. They can heal or hurt and people have different meanings to the same words. Be flexible with them and always know who your patient is before using certain statements. Let them know that this is a technique designed to evaluate hidden attitudes and psychological wounds and that if any of the statements are not comfortable to them, it will be explained or phrased in a different way. Above all, if the patient is not responsive to this type of investigation, quickly go on to something else.

Second, the different levels of the mind do not always agree. Often an affirmation said one way will be strong, but a slight change of linguistics may give a very different result. For instance, test an intact muscle on someone with a chronic knee problem and have him say, "I am curious why my knee won't heal." Usually this type of affirmation tests strong. Then have them say, "I feel curious why my knee won't heal." If they have a knee problem of long duration, the second statement will usually test weak. I often show people the difference between these two statements just so that they can see that what they think from their conscious mind (I am) is different from what is going on at a deeper level (I feel). Another way to do this, which is usually more effective, is to have them say, "In my innermost being, I am curious why my knee won't heal." The part of the person addressed when they say "I am" is usually a more superficial part of the psyche. This part is in control and is self aware in a limited way. If we ask the person to expand his self awareness to include a deeper part (inner being, inner self), then we access the unconscious patterns that are behind an injury or illness. After correcting the affirmation, "In my inner being I am curious why my knee won't heal", have them say the first affirmation, "I am curious why my knee won't heal." This first affirmation that was originally strong will now test weak. **This is a very important principle to observe. Often the superficial and deeper aspects of the psyche will not agree. Test this by using the more superficial linguistics first and observe the strength of the statement. Then test the deeper version of the same statement and observe the weakness. Expose and correct the deeper pattern. Then the adaptation or rationalization of the issue in the more superficial consciousness will no longer remain in force. It can then be exposed and corrected.** Sometimes only the superficial or the deeper version of the affirmation is necessary. Treat what is found. The more complex issues, however, require that the discrepancy between the different levels of the mind be resolved. If a person is in denial about his illness, have him say for example, "I am willing to heal my colitis," and observe the strength. Then have them say, "In my inner being, I am willing to heal my colitis," and observe the result. Fix the second affirmation and then retest the first affirmation again

to see if a change has occurred. It may take more than one correction to fix a given statement, if the statement hits a major issue for the person. A sequence of complimentary statements is often necessary to clear a particular psychological pattern. This will be discussed as we get into the various examples. The key to correcting a problem is in finding the correct way to phrase the statement to activate the maximum response in the psyche.

EXAMPLE

Chronic Shoulder Problem From Stress

The first example will show the principles involved with the different statements. Once we have the idea of how to pick apart a problem, the analysis and correction will go very quickly.

This example revolves around a chronic problem, such as a recurring shoulder pain. After fixing the pelvic, cranial and spinal imbalances, doing IRT and supplying nutritional support, the person continues to have exacerbations of the shoulder problem when under stress. Begin to investigate the psychological reversals with the following affirmations. Some of these statements are long and may require slow repetition for the patient to understand what he is saying. Different wording is used here in similar statements for demonstration purposes. Treat when a statement causes a weak indicator response.

"I am curious why my shoulder continues to be a problem." (If this statement is strong, do the next one and then come back to it.)

"In my inner being, I feel curious why my shoulder continues to be a problem."

"I feel curious how to heal my shoulder."

"I am willing to learn the lesson my shoulder has to teach me about myself."

"In my inner being, I feel willing to learn the lesson my shoulder has to teach me about myself."

"I am willing to make the necessary changes in my life to heal my shoulder."

"In my inner being, I am willing to make the necessary changes in my life to heal my shoulder."

These few statements ensure that the different levels of the patient's mind are ready, willing and able to pursue healing. Both versions of each affirmation may not always be necessary. However, once the deeper statement is corrected, the more superficial affirmation will usually need attention. The best way to start a session with someone is through the development of curiosity. **Curiosity is the doorway to learning or healing.** Unless a person feels curious, nothing new is gained. Everyone is curious about how to get well when he is sick. The question is, how curious? Most people are not curious if they have to contact their feelings or a deeper aspect of themselves to find out. I explain to people that,"no one ever hurt their thinking." Wounds are in our feelings. The purpose of this exercise is to open the channels that will allow the nervous system to communicate its real needs. When curiosity is restored (on a deeper level) to a person who is psychologically stuck on an issue, both the patient and the doctor are open to receive insight and intuition about how to proceed. It is startling how quickly a new insight appears as soon as the doorway of curiosity opens.

Once the above affirmations have been corrected, the fun begins. Suppose the problem is in the right shoulder and liver/gall bladder reflexes keep coming up even with the best of nutrition and liver detoxification correction. Chinese medicine attributes the emotion of anger to the liver/gall bladder meridians. Talk to the person about how they deal with the stress of work or home. They will provide invaluable information about how to continue. For example, the person then relates that he has the"boss from hell," and everyone is afraid of getting downsized (fired). Start with the next set of affirmations. Do them both on the superficial and deeper levels. (Only one version of the affirmation will be given.)

"I feel curious how to deal with the stress of work."

"I feel patient with myself when I am at work."

"I have faith in myself when my boss is angry."

"I feel patient with myself when my friends lose their jobs."

"I acknowledge my feelings about myself when I make a mistake at work."

"I feel the presence of peace within me when I am at work."

Have them visualize different stressors at work and have them repeat these same affirmations:

"I feel patient with myself." "I acknowledge my feelings about myself." "I have faith in myself.""I allow myself to feel my feelings."

A great educational aid to the patient is to have them say this statement first: "I acknowledge my feelings about my boss." Then have them think about their boss and say this next affirmation: "I acknowledge my feelings about myself." The first statement will usually test strong. The second statement will usually test weak. If the second statement does not test weak, make sure the person is visualizing their boss in a stressful situation. Often the mind will go to an area that is comfortable and focusing it on the stress is necessary. We already know how we feel about our boss. How we feel about our self is the great mystery. This is one of the most important concepts in working with affirmations and the psyche. **Whatever is going on in a person's experience, is their internal experience. No one outside them is causing the problem.** It is the old story of not killing the messenger because we do not like the message. I tell people the story about the pick pocket, who when he meets a holy man, sees only his pocket. Yet, when a holy man sees the pick pocket, he sees an image of the divine. This is not a difficult idea for most people to understand and they usually like to learn how their mind projects itself out on the world.

The next and most powerful of the ideas that we need to investigate is how people emotionally bond to a stressful or traumatic situation. It is our nature to bond on the emotional level. The problem is that we bond in both healthy and unhealthy ways. Any intense emotional experience imprints itself on our nervous system. If we bond, we are bound, and often the things that bind us are not always healthy for us. Another way to describe this is that we identify ourselves with external events or experiences, so that what happens outside us becomes the stimulus for how we feel internally. The following affirmations help to differentiate the real self from the external emotional trigger. Again, these statements are phrased differently for demonstration purposes.

"I feel the difference between my inner being (or inner self) and my boss' anger."

"I feel the difference between who I really am on an inner level and the part of me that reacts to my boss' anger."

"I feel the difference between my inner being and the fear of my coworkers."

"I feel the difference between my inner essence and the part of me that reacts to my coworkers' fear."

"I feel the difference between my inner self and my boss' expectations of me."

"I feel the difference between my innermost being and my fear of losing my job."

These are not intellectual statements. They are designed to contact an area of the unconscious mind and expose it so that a correction can be made. Obviously, there can be literally dozens and dozens of permutations to fit the specific situation. **The important thing to remember is that we want to help the patient remove their identification of themselves with any external situation or any internal weakness that divides them from knowing their true identity.** People are not the anger of their boss, nor are they their reaction to the boss, etc. This is a major tenet of eastern religious philosophies, the idea of non attachment. This doctrine teaches that the external world may have a type of reality, but it is not the internal reality of a per-

son. Identification with the external world, causing loss of internal awareness of self, is the cause of suffering. The point is not to delve into eastern philosophy, but to help people release the identifications that keep their nervous systems constantly negatively facilitated. **This type of affirmation, when used in its many different forms is probably the most important of all the affirmations, and it has limitless applications.** People have pain and they have problems. However, they are not the pain and they are not their problems. Separate them from their identification with their pain and problems and then work on the reason that they identified with it in the first place. "I feel curious why I identify my pain as myself." "I feel willing to explore the part of my self that identifies with my boss' anger."

The next affirmation in this example is similar to the ones we have just done, but it illustrates a different twist. "I feel the difference between the inner nature of my boss and his aggressiveness." This enables the person to connect with his boss from a more objective space. Instead of identifying with the boss' base nature, we have tuned him to a deeper part of his boss' essence. He does not have to like his boss, but it is important not to get hooked into his negativity. He may be a petty tyrant, but he is still a fellow human being.

This example of affirmations can be done in about 5-7 minutes, including discussion with the patient and correction. The important thing to remember is that there are superficial and deeper levels that need to be accessed in a specific sequence depending on the situation. Get the patient curious, willing and ready to explore the problem. Then help him to acknowledge his own feelings and to detach his nervous system from the external or internal misidentification. The key is to find the correct linguistics that allows access to the problem.

Parental Conditioning

The next area to discuss relates to parental conditioning. Many of our patients have had dysfunctional parents. The first years of life are crucial to the development of psyche. What we learn and experience (which is learning) in the first seven years is extremely important. We learn everything about our parents or primary guardians. They teach us who they are on all levels. As infants and young children we operate through the bonding mechanism of identification. We not only mimic, but internally we become our parents. We incorporate their fears, hopes, dreams and all the psychological issues that they have resolved or denied. As we grow in experience and develop our own personalities, we begin to modify and work out much of these learned patterns. The best way to find out about a person is to ask them to describe the positive and negative qualities of the people that they have studied in greatest depth—their parents. The description of the positive and negative qualities of their parents is a good indicator of what is operating in their own psyches. Their personality may be very different from that of their parents because they have worked to be different, but the internal operating principles are the same. People usually take one of several paths with respect to negative emotional conditioning as a child. As they grow older, they will either repeat the same patterns as their parents or they will rebel and do just the opposite of what they learned. The problem is that rebellion is the same thing as conformity. It is just the pendulum swinging in the opposite direction. Conforming is easy and it is also easy to rebel. What is difficult is to take the middle road of changing one's internal belief system and unconscious attitudes. Children of alcoholics often display this principle. Some children go on to become alcoholics and others in the same family may grow up to be vehemently against drinking. Nevertheless, the child that rejects using alcohol as a way of dealing with stress may still have the same poor self esteem, willfulness, fear of rejection etc. that her parent had. Instead of drinking, they become workaholics, zealously religious, perfectionists or another manifestation of the same root weakness learned from her parent. The more difficult path would be to self examine the messages learned from early childhood and work to transform the internal war that drives the person.

A person does not have to have terrible parents or major problems as a child to learn unhealthy attitudes. Fear, pride, guilt, insecurity, prejudice, etc. are common to some degree in all of us, especially under certain circumstances. It may not be our conscious intent, but it is part of our internal programming. When we begin to investigate with these affirmations, we find that many chronic endocrine and digestive problems have deep psychological roots. All of this is just a preamble to the following affirmations. To illustrate these principles, let us examine a woman who complains of an abusive father and a mother who had very poor self esteem and was often physically and emotionally victimized by her husband. This woman has had one bad relationship after another, has chronic hypoglycemia and many female problems. The following affirmations work well as a general clearing for the dysfunctional messages she received from her parents while growing up. We can do the same set of statements for both father and mother.

"I am willing to accept that my mother might never understand who I really am." If this statement tests strong, then add, "In my inner being" to the beginning. This is true for all of the statements.

"I am willing to accept that my mother might never understand my emotional needs."

"I am willing to accept that my mother might never appreciate my contribution to the world."

"I am willing to accept that my mother might never love my father as I feel he deserves."

"I am willing to accept that I cannot change my mother."

"I am willing to accept how much like my mother I am."

"I am willing to accept that I was born to my mother for my highest good."

"I feel willing to accept that my father's expectations of me might not reflect my own purpose in life."

(Notice the use of the word,"might." People sometimes want to use the word, "will" in its place. Leave it open for the positive change to occur.)

These affirmations have nothing to do with the mother. They deal with how the person relates to the mother archetypal patterns within herself. If the mother did not honor her own emotional needs, the child learns that the feminine part of her psyche does not honor its own needs. If the parents did not express love and respect to each other in a healthy way, then the male and female aspects of the child learn to relate to each other similarly. It **is all internal.** The affirmation acts as a therapy localization of that pattern within the psyche. It may not be enough just to say an affirmation and do a quick correction, to clear a lifetime of incorrect thinking and feeling. Nevertheless, it is a great step in the right direction and will greatly help counseling and other growth choices. After the above set of affirmations are balanced, ask the patient to describe the negative qualities of each parent. Then move to this next set of statements.

"I acknowledge the mother part of myself that feels fearful."

"I acknowledge the mother part of myself that lacks self worth."

"I acknowledge the mother part of myself that accepts victimization."

"I acknowledge the mother part of myself that doesn't listen to her needs."

"I acknowledge the father part of myself that is aggressive."

"I acknowledge the love I feel for my father despite these negative qualities."

While visualizing a painful experience with the mother or father have them say:

"I acknowledge my feelings about myself."

"I allow myself to feel my feelings."

"I feel the difference between my inner being and my mother's personality."

"I feel the difference between my fathers inner being and his personality."

"I feel patient with myself."

Ask the patient why the father was so abusive and she replies. "I guess he felt inadequate." Use the affirmation,"I acknowledge the father part of myself that feels inadequate."

This list is endless and it should be apparent how to continue. The patient will gladly help fill in the blanks and it is up to the doctor to phrase the statement properly. Any problem the parents have can usually be found within the psyche of the child. It is my experience that despite the best of psychotherapy, this work still needs to be done. People jump at the chance to release the stress and confusion of their childhood. They become excited about the progress they make and often come back to the next appointment with a list of issues and problems. The release of tension that people experience can be quite extraordinary.

Grief and Loss

The pain and grief of losing a family member, close friend or even a pet, can have dramatic health consequences. This topic is a difficult one for many people, but one that all of us will deal with at some time or another. Affirmations directed to the area of pain can be of great benefit in these instances. Patients are very grateful for this type of help. This is an area where attachments are very strong and dealing with death brings people face to face with many of their greatest fears and insecurities. The following affirmations are often quite helpful. For this example we will use the name Bob as the deceased. People generally do not mind a spiritual reference when dealing with this topic, but I always ask first to make sure there is no objection.

"I feel the connection between my spirit and Bob's spirit."

This is one of the most important statements. It helps ease some of the feeling of loss if we can in some way reconnect a person with the essence of his loved one.

"I feel the difference between Bob's spirit and his body."

"I place Bob in God's hands."

"I feel the difference between my inner being and Bob's pain (fear)."

"I feel the difference between my inner being and the emotions of others (at the funeral)."

"I feel the difference between my inner being and other people's grief (discomfort, fear, etc.)."

"In my inner being I acknowledge how temporary life truly is."

"In my inner being I forgive myself for all that passed between Bob and myself (visualize specifics)."

"I feel Bob's forgiveness for all that passed between us (visualize specifics)."

"In my innermost self I forgive Bob for all that passed between us."

"I feel that Bob knows that I forgive him."

"I feel the difference between my inner being and the pain I feel."

Think of Bob's suffering and say, "I believe that a higher purpose was working in Bob's life." Have the patient think of his own loss and then have him say, "I believe that a higher purpose is working in my life."

This brief list should demonstrate the types of statements that will help in these situations. Listen to the patient and he will tell you where his pain is. These affirmations must be done with sensitivity and care. Sometimes these statements are hard for a person to say, especially if the grief is fresh. I have seen patients struggle to even whisper some of these statements. However, after one quick correction, the intensity vanishes, it becomes easier to work with the person and he is very grateful for the release. The affirmations will work even if many years have passed. It depends upon what a person has stored within himself. It is

often at the anniversary of someone's death that a patient will have a recurring illness such as bronchitis, etc.

RELATIONSHIPS

Following are a few affirmations to help people in relationships.

"I feel curious what I might change about myself that would help my wife."

"I feel the difference between my husband and my father."

"I feel the difference between my husband and my mother."

"I feel the difference between my parent's relationship and our relationship."

"I feel the difference between my inner self and my wife's anger, etc."

These affirmations, on both superficial and deeper levels, helped a woman whose ex-husband was manipulating her through her kids.

"I am willing to learn the lessons he has to teach me about myself."

"I feel the difference between my inner being and the part of me that reacts to him (say his name)."

"I feel the difference between my inner being and what he would like me to feel."

"I feel the difference between my inner being and what he would like my children to feel about me."

Some of these affirmations had to be repeated four or five times, but after the corrections, her neck and shoulder pain had eased.

MISCELLANEOUS

The following affirmations are listed to help provide ideas about how to investigate different situations. Visualize many different stressful situations while saying these statements.

"I feel the difference between my inner being and the pain."

"I feel the difference between my inner being and the part of me that feels the pain."

"I feel the difference between the need for nourishment and the desire to eat."

"I feel the difference between pride and self esteem."

"I feel the difference between love and permissiveness."

"I feel the difference between disciplining my child with anger and disciplining my child with love."

"I feel the difference between making a mistake and learning a lesson."

"I have faith in myself when...(I speak in front of groups; take a test; talk to my mother, etc.)"

"I feel there is a higher purpose for my experience of this event (visualize painful experiences)."

For someone who cannot relax:

"I feel secure when I am relaxed."

"I feel productive when I am relaxed."

"I feel worthy when I am relaxed."

The preceding examples present a sampling of the variety of statements that we can use to probe the psychological side of the A.K. triad of health. The choice of linguistics is up to each doctor, but the key is to help the patient feel from a place deep within that he is not the pain, injury, neurosis, etc. The inner part of the psyche is the observer of life's experience and when we get "lost in the movie" of life, especially if it is a horror film, it can be quite painful. Help them realize that the pain or trauma is like a movie they saw and not a nightmare that they are living. Patients get very excited about this type of work. It facilitates quick movement in their relationships, their counseling, and the flow of their daily lives.

SUMMARY

1. Have the patient vocalize a positive statement, and if an intact muscle weakens, abduct the legs to hold the body's focus on the weakness.

2. Therapy localize to an area on the back of the neck that negates the weakness, and lock the legs together and apart. (Now is a good time to scan the body to see what areas are involved. Test the acupuncture set points on the head or check the spine, cranium and pelvis. Demonstrate to the patient the area that needs correction. A category two, possibly followed by a category one, usually indicates the end of a sequence of corrections.)

3. Find an area on the skull that therapy localizes, and tap it lightly to correct the problem.

Following are the major affirmations (fill in the blanks with any trauma or psychological issue, such as fear, guilt, over sensitivity to other people's opinions, etc.) Change them according to what is needed. Have the patient visualize different situations while saying the same affirmation. Use the affirmation as a tool to investigate, probe and dissect the psychological block or trauma. All affirmations can be said from a deeper perspective by adding the phrase," In my inner being..." Listen to the patient and be creative.

"I am curious why..."

"I feel curious why..."

"I feel willing to make the changes necessary to heal..."

"I feel the difference between my inner self and..."

"I feel the difference between my inner being and the part of me that..."

"I feel the difference between (someone's name) inner self and his..."

"I acknowledge the mother/father part of myself that is..."

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Clinical Examination Procedures: EXAMINATION PROCEDURES TO HELP DETERMINE THE PRESENCE OF A CERVICAL CORD COMPRESSION, STENOSIS OR SPACE OCCUPYING LESION

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ABSTRACT

Clinical Examination Procedures (CEP) is a series of examination procedures that help objectify joint pathomechanics that are resulting in mechanoreceptor deafferentation and or spinal cord lesions. The basic procedures involve the temporary accentuation of the compressive forces or pathomechanics that are resulting in sensory and or motor losses. This is followed by a repositioning of the patient, segment or joint in a position that will result in the greatest quantum of mechanoreceptor afferentation. The temporary reposition of the joint, segment or body position will result in the resumption of motor power and often, the complete restoration of all sensory functions. Specific clinical procedures can be applied to the cervical spine, temporomandibular joints, shoulder, lumbar spine and pelvis. This paper will discuss clinical examination procedures used in cervical cord compression and/or stenosis. The "medical necessity" can be objectively demonstrated via clinical examination procedures to the patient, attorney or prepaid health insurers. CEP is based upon approved applied kinesiological techniques, principles and functional neurology. This article is presented for informative purposes only.

INTRODUCTION

In an attempt to answer the question asked by the patient, third party payors or a managed care organization: Why do you believe that you can help this patient? After all, the patient was initially evaluated by a Neurologist, had a brain scan and nerve conduction velocity studies that were all within normal limits. The patient then went to an Orthopedist and received steroid prescriptions and trigger point injections, and was referred for six months of physical therapy. After four months the patient quit. Then went to a Chiropractor, and has received 25 treatments with only minimal improvement. And now you say that you know what is causing the patient's problem and that you need an MRI to substantiate your preliminary diagnosis. Managed Care Organizations keep saying the same thing, "Convince us of the medical necessity!"

The fundamental principle of CEP is that in the central nervous system, the sensory system stimulates spinal cord and rostral reflex centers that excite the motor system.(1) Joint pathomechanics result in a decreased quantum of mechanoreceptors receiving adequate stimulation to excite afferent sensory axons to threshold.(2) The result is with the loss of sensory input there is a proportional loss of motor function and power.(2) With this in mind following the

initial examination of a patient with motor and sensory losses noted, CEP can be utilized. At this point the doctor has the option to increase the pathomechanics that will result in a greater number of muscle weaknesses and possible sensory losses, or increase normal articular joint motion that will increase the quantum of joint mechanoreceptors being excited to the threshold, and excitation of its afferent axon to the central nervous system with the concomitant of restoration of motor power function and many times the immediate restoration of all sensory functions.(3) These functional neurological principles of sensory afferentation and deafferentation procedures were first demonstrated by Dr. George J. Goodheart via the various challenge procedures, carpal tunnel examination procedures and body in distortion.(4,5)

Materials & Methods

***Example** - Suspected cervical cord compression and/or stenosis.*

History: Patient presents with a history of lower back and leg pain. Standing or sitting for long periods of time exacerbate the symptoms. Usually, the problems are the result of some type of injury or cumulative minor injuries to the back and or neck. Often the patient will report no neck pain. However, when questioned in consultation, the patient may relate symptoms of increased clumsiness or frequent stumbling, loss of sensation in the feet or increased calleous production, light headedness, or dizziness when looking up or down suddenly.(6)

Examination: Cervical (Foramina) Compression Test is usually not remarkable, likewise with cervical distraction. Decreased cervical ranges of motion is present in either flexion, extension and lateral flexion is greatly decreased on one side. The lower extremity examination is performed with the patient in a supine position with the cranium and cervical spine relatively level to the patient's shoulders and thorax. The pat ient will usually exhibit decreased vibratory sense in several toes, and a portion of the foot or feet. Pinwheel examination will demonstrate some dermatomal changes or losses. Deep tendon reflexes will either be absent, hypoactive or hyperactive in the Achilles and/or the patellars. Babinski's Sign may or may not be reactive. Some motor power losses will be appreciated in the lower extremity musculature but, especially of toe flexors and extensors. Taking a deep breath and bearing down (Valsalva) is negative. However, if Valsalva is positive in this position and reproduces localized neck pain with pain in the lower extremities in a dermatomal distribution suspect a cervical spinal cord compression, herniated disc, stenosis or space occupying lesion.(7,8) At this point ordering an MRI would be appropriate. However, this is usually not the case. Most cervical cord compression syndromes are not of an abladive nature.(6)

The object of CEP is to locate the level and type (positional) of pathomechanics that are responsible for the motor and sensory deficits. This is accomplished by increasing the compressive forces or pathomechanics that are in question. Thus, if flexion cervical pathomechanics are visualized on x-ray or suspected, increasing the flexion of the cervical spine will temporarily increase the compressive forces or pathomechanics. This is accomplished by raising the head piece up to 30 degrees or using a firm pillow placed behind the patient's head. The main object is to exaggerate the pathomechanics by at least 30% from the neutral point. Thus, increase cervical flexion and keep the patient in this position for two minutes.

If a flexion cervical cord compression and or stenosis is present it will result in profound motor weakness of initial weak muscles and it will change the state of a previously strong or normal muscle to that of a weak state or paresis. This can be observed in the muscles of the lower extremities in addition to the muscles of the upper extremities. Profound sensory losses can be immediately demonstrated with a tuning fork, pinwheel, toe positional sense and reflex hammer following two minutes in this position. The patient is then asked to take a deep breath and bear down as if he were moving his bowels, Valsalva. This results in a localized pain in the cervical spine and pain in a dermatomal distri-

bution or acute sense of awareness of a dermatomal area in the feet and or lower extremities.(8) Results are noted and certainly recognized by the patient. At no time is the patient in pain by performing these procedures other than that of taking a deep breath that causes moderate discomfort in the cervical spine.

The head piece is then lowered so that the cervical spine and head are in extension, approximately 20 degrees. The patient is left in this position for two minutes. The following examination is performed identically to the previous examination. After two minutes in this position there will be a remarkable return of the patient's motor power and a complete absence or reduction of the previous noted sensory losses, the Valsalva is also unremarkable and often there is a restoration of the deep tendon reflexes. This is what I have observed clinically. It is obvious that in the case of a large cervical space occupying lesion or large compression that not all sensory and motor function may not return by putting the patient's head and neck in the opposite direction that caused the profound losses.

Results

The before mentioned procedures have been utilized in my office for the past 3-4 years. MRI has confirmed a diagnosis of cervical cord compression or stenosis in each case. A report to the authorizing party of the before outlined procedures with explanation has resulted in an approval of an MRI study to confirm a preliminary diagnosis of cervical cord compression or stenosis in 15-20 cases.

Discussion

In the narrative report a section is labeled "Clinical Examination Procedures" just before the "Diagnosis" section and a detailed description of the clinical procedures is reported with results and an explanation of the neurological findings. Then, in the section entitled "Diagnosis" a reference is made to CEP and the clinical indications or conclusions. CEP can be explained by the following points and references in the report to the patient, referring or interested party.

1. The spinal cord is not round but more oval (egg) shaped especially in the cervical cord.(1)

2. The descending nerve fibers that supply the legs and feet are represented laterally in the corticospinal tract in a laminar distribution. The area most distal to the cord compression/stenosis will reflect the signs and symptoms of neuropathy. In this case, the toes, feet, ankles and legs.(6)

3. In the normal cervical spinal column increased flexion or extension does not result in motor power losses to the lower extremities. Sensory modalities remain intact. Taking a deep breath and bearing down is also unremarkable.

4. During the clinical examination procedures portion of the examination in this patient's case functional neurological losses could be demonstrated suggestive of a compressive or stenoic nature to the cervical cord. Increased flexion resulted in increased pathomechanics of the cervical spine that caused an increased angulation and compression on an already comprised cervical cord. This was demonstrated via the functional loss of the before named sensory and motor functions and a positive Valsalva.

Summary of Procedures

1. Patient relates symptoms of increased clumsiness and stumbling with history that may be suggestive of cervical cord compression / stenosis.(6)

2. The patient initially is in a supine position with the head and cervical spine in a neutral position, or level to the shoulders and the shoulders. Note results of initial motor and sensory losses.

3. The clinical examination procedure's portion of the examination is to document that increased flexion or extension will exacerbate the motor and sensory losses. Normal cervical flexion and extension is 45 degrees.(9) By adjusting the head piece 30 degrees in flexion and 20 degrees in extension will increase or

decrease compression forces and pathomechanics. This will result in either increased or decreased objective motor and sensory losses or restoration of function. This is determined by direction of the compressive force, extent of stenosis, or space occupying lesion.

4. If x-rays or palpation suggest flexion cervical pathomechanics then raise the cervical head piece so that the patient's head is in approximately 30 degrees of flexion. After two minutes with patient's head in this position examine the motor-power of the toe flexors and extensors, and all lower extremity and upper extremity anterior compartment musculature. In anterior cervical cord compression or stenosis there will be a profound loss of motor power, not only in the muscles initially found weak but also of additional anterior compartment muscles of the lower and upper extremities. Sensory losses will also be more profound and extensive than the initial examination. Asking the patient to take a breath and bearing down will cause localized cervical pain and a replication of pain and/or acute awareness in a dermatomal distribution to the patient.

5. A report is made to the authorizing party of the "medical necessity" that imaging procedures are necessary based upon CEP as outlined in this report.

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A Review of Key Principles in Functional Neurologic Assessment and Treatment

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Abstract

Key principles in applied kinesiology functional neurologic assessment and treatment are reviewed as an introduction to the field. Emphasis is placed on creating a conceptual framework which allows the practitioner to navigate freely among physiologic variables encountered in patient treatment, rather than relying on rote protocols.

Introduction

This is a review of key principles, rather than a review of techniques. I offer the following observations as a student of the functional neurologic assessment process known as applied kinesiology, and as a student of many teachers, to whom I am grateful. Some of the ideas presented here are from these teachers directly. The rest is from them indirectly, stemming from things they have said that got me thinking.

I once asked a friend what he had learned at the end of his first year of internal medicine residency. He replied, "Air goes in and out; blood goes round and round; and oxygen is good." This simplicity helps you keep to the fundamentals, so you can stay focused on the big picture of what to do for the patient. Otherwise, the patient's care can get lost in a sea of details.

As Goodheart says, "Your patients will teach you everything, if you let them." He has often described himself trying to understand what he has observed while treating a particular patient as having "an answer for which he has no question." The patient is served best by our attempts to understand the physiological underpinnings of the effects we see in treating them. It is by this means that we can make the clearest interpretations of what we observe, and therefore create the best clinical outcomes.

Understanding the physiologic underpinnings also helps us understand if a new idea or observation we make in applied kinesiology is important or tangential. Real integration of procedures can only take place if there is an understanding of how a technique changes a person's physiology, so we know when and why to use it. If this understanding is inadequate or absent, there will be a tendency to compensate by creating highly detailed protocols that guide the practitioner through the treatment process. Protocols are much better than nothing, but not as useful as understanding why you are doing what you are doing.

One might think of it as the difference between knowing the principles of navigation versus being given a detailed set of instructions on how to get somewhere. Directions will typically get you there, but if there is an unexpected turn, or if the road you were counting on is closed, you may not be able to work through to your destination, unless you are a good navigator.

Many of the patients that seek care from applied kinesiologists have seen many other doctors already without success. So you can count on the fact that they are not typical patients, for whom the usual rote solutions will succeed. You need to be a good navigator to work your way through the uncharted waters that these kinds of cases represent.

DISCUSSION

1. Goodheart has always encouraged practitioners to "measure, measure, measure." The possibility exists in A.K. to treat someone in a very busy way, and not necessarily make changes that influences his physiology. By measuring something physiologic, we are linking with physiologically relevant data points, to ensure a physiologically relevant treatment effect.

Measuring might consist of range of motion, level of pain on palpation or movement, weight balance, blood pressure, lingual ascorbic acid response, urine test results, or any of a variety of other parameters.

2. Figure out what is at the root of the patient's problem. This sounds too simple to mention, but is crucial. Early on, identify if the patient's problem is primarily immune, digestive, neurologic, allergic, endocrine, mechanical, emotional, or of another type.

For example, all functionally inhibited (weak) muscles might be restored to a facilitated state by TL to the thymus NL. This would give the impression that immune enhancement was in order. Or TL to a variety of areas might be nullified by TL to one particular area (a vertebra, an NL, an acupuncture point...). Often it is necessary to use two hands in such cases, one to TL each of the areas you have already identified as having a positive TL, the other to TL the area you suspect will nullify the other TLs.

Or, if taste bud receptor stimulation with an antihistamine like antronex created a global facilitation (made all muscles strong), one might have the impression that the histamine level was being driven up by an allergen or other factor.(1) If you can find an allergen that creates a global weakening effect, this reinforces the impression that there is an allergic pattern. Further, if histamine or histidine bring out a weakening adrenal pattern, this furthers the idea that the allergic process is creating a high histamine level, which is over-stimulating the adrenals. The more evidence one can gather that one root problem is driving the patient's dysfunction, the more precision one will have in treating the patient.

3. When testing muscles, the most basic thing to keep in mind is that the response you are looking for is a change. Don't get hung up on the idea that strength is "good" and weakness is "bad." When you introduce a variable (like having the patient TL an area, or doing a vertebral challenge), you are looking to see a change. If the variable you introduce is relevant, you will observe a change. A strong muscle may get weak, or a weak muscle may get strong. Manual muscle testing responses are Boolean (as in Boolean algebra, the math of 0 and 1). If you flip a switch, you put it in the opposite position. If it was off, you turned it on. If it was on, you turned it off. Having observed the response, it is your job to interpret it, using your knowledge of physiology.

4. BUT, some effects are global; some are local. You may find that TL to a particular area only strengthens or weakens particular muscles, rather than affecting all muscles equally. This relates back to the example above, where TL to the thymus NL strengthened all weak muscles. This would be taken as an indication that the thymus involvement was significant, rather than incidental to the problem. Conversely, a patient with a knee problem might not show a global weakening effect from insalivating wheat, but may only show a weak TFL or other knee-related muscle. This weakness is enough to create the knee instability, but it will not be detected if you are screening for allergic responses by seeing if potential allergic substances weaken a strong indicator muscle.

Because not all effects are global, it is typically a good idea to do most testing using a weak muscle, looking for effects that strengthen it, rather than using a strong muscle, looking for effects that weaken it. It is more likely that a variable you introduce (TL, challenge, change of posture, or other receptor stimulation) is sufficiently relevant to create a global strengthening effect, which you will be able to observe as a strengthening of the weak muscle you are testing. On the other hand, if a variable you introduce has a local weakening effect that does not apply to the muscle you are testing, you will think the variable made no change, because it didn't change the muscle you were testing. So you'll miss it.

5. It is useful to think of manual muscle testing as functional neurology, as Schmitt has described.(2) The functional neurologic assessment process consists of 1. creating receptor-based inputs which influence central neurologic integration, and 2. observing the resultant changes in neurologic output by observing changes in the way the nervous system controls muscular function. Manual muscle testing uses the window of neuromuscular function as a reflection of overall neurologic output change. Simply put, you make an input change; it changes central integration; you see the outputs change by seeing the neuromuscular control change.

Seen in this way, each step in the process of diagnosing and treating a patient using A.K. consists of creating a specific neurologic context and observing the patient's response to that context. Joe with eyes focused on a point is not the same patient neurologically as Joe with his eyes closed. You must find the context in which the dysfunction occurs, and figure out what is going wrong in that context.

For example, a patient may only have severe fatigue in the spring. If he is allergic to a spring pollen, it may cause his histamine level to increase, over-stimulating his adrenals. This is a problem within a specific context. The adrenal NL may only TL if you create a neurologic context that includes significant representation of histamine. This might be done by putting histamine in the mouth, combined with TL to the adrenal NL. This creates the neurologic context in which taste bud receptor stimulation with histamine is combined with touch and pressure mechanoreceptor stimulation. If you combine the inputs in a way that approximates the state the patient's system gets into when the problem is active, you have a chance to make the observations you will need, to fix the problem.

6. Find out why something recurs. As Goodheart says, the third time you fix it, you must be asking what other thing brings it back. There will be some neurologic context that causes the patient's problem to recur.

7. The recurrence of a problem may often be driven by what Goodheart has called "stupid body wisdom." Figure out what the patient's body is trying to do. The system may be driving itself in an unfavorable direction, trying to achieve a result.

Imagine a man running on a sidewalk next to a fence, with shrubs hanging over the top of the fence. He leans to the side to avoid the shrubs, but this makes his back hurt. You could straighten him up to fix his back, but it would force him further into the problem he's trying to avoid. He would get shrubs in the face. Sometimes we may think we have done something good by taking away the patient's complaint, but we may have pushed them into another one. The real solution here is to cut down the shrubs. Be sure you understand what the body wisdom is trying to accomplish, and how you can satisfy what the body is trying to do.

8. A good example of stupid body wisdom is seen in the effects on body chemistry observed by Schmitt.(3,4,5,6) The body has the ability to make certain substances. You should not need to supplement these. If a patient strengthens on serotonin, for example, you must ask, "If the body needs serotonin, why doesn't the body just make some?" The answer appears to be that the body avoids increasing the level of serotonin because a higher serotonin level would create another problem elsewhere in the body. You will find that if serotonin strengthens, it will also bring out a hidden weakness elsewhere. This hidden weakness pattern is the reason the body doesn't raise the serotonin level. If the body elevated its serotonin level, the other problem would get worse.

So the body has one problem if the serotonin level is kept low, and a different problem if the serotonin level is raised. This is a "double-avoidance" problem. **These are often the most important things to fix, because these are the kinds of problems that the body can't self-regulate its way out.** The body should be able to fix everything by self-regulatory mechanisms. If you get these double-avoidance patterns out of the way, the body

can often self-regulate what's left to fix.

9. Help the body, then let the body help itself. As Goodheart says, "first you have to make it, then you have to let it." If you fix the underlying serotonin problem, for example, the body can often self-regulate its way out of the rest of the pattern.

10. Fixing the underlying pattern is also the key in understanding why some patients show a perpetual need for a nutrient. As Goodheart says, the third time you see something, figure out what is driving the pattern. Schmitt has observed that when a substance shows a strengthening effect over the course of many sessions, one should suspect that it is masking something else. For example, if zinc still strengthens a patient despite months of zinc supplements, suspect that the patient has a sensitivity to a zinc antagonist like copper. The patient's copper level may be high, or they may just have a neurologic reactivity to copper. Fix the copper problem completely, and zinc will no longer strengthen the patient.

Seen in this way, many nutrients can be used as screening tools for sensitivities to the substances opposite them. This is very similar to the use of antronex, arginex, and aspirin, in screening for high levels of histamine, arginine, and bad fats respectively.(7) The substance that strengthens often is not the one to give. Rather, desensitize the patient to the opposite one, and the strengthening effect will no longer be present.

This principle is critical to understanding and interpreting manual muscle testing responses to taste bud receptor stimulation (oral nutrient testing). The same principle can be used to create a post-desensitization check. If your attempt to desensitize the patient to histamine is complete, he will not strengthen on antronex as he did before you desensitized him.

If they still strengthen on antronex, you probably missed something.

11. Getting the patient's system organized neurologically is often the key to correcting stubborn problems. A lack of neurologic organization is commonly known as switching. If the patient's system is not correctly organized, changes to neurologic inputs (TL, vertebral challenge, changes in posture, etc.) will not result in properly organized manual muscle testing responses. If you try to interpret the patient's condition on the basis of these responses, you will not get the results you seek.

For example, if a patient complains of stomach pain, but you can't find any stomach related muscles weak, suspect that they are switched in some way. Once you un-switch them effectively, you will typically find one or more stomach related muscles weak, in a pattern consistent with the symptoms. Goodheart, Schmitt, and others have added considerably to the understanding of switching since the original observations by Goodheart.(8) Refer to papers by Schmitt and Walther for discussions of the subject. (9,10)

12. Once you know a basic principle, you can apply it anywhere. If you know the right arm flexors should shut off when the right leg is forward, you can have the patient TL a spinal segment, acupuncture point, NL, NV, or breathe in or out; do pretest imaging; breathe in bag; test a nutrient; or test a substance that creates the normal neurologic inhibition that should be present to allow the arm flexors to shut off as they should in that case.

Many techniques give specific instructions about what to do at each step of a process. If you find that a certain acupuncture point TLs, for example, there may be instructions on what to do to fix it. But there are many ways to fix it, and if you can find that one thing fixes that finding, and also fixes most or all other things, that is the thing to do, rather than doing a rote step by step process the same way each time you find the problem.

For example, if you find that exposing a patient to hypochlorite ion (OCL-) using a Clorox sniff creates a weakening effect, you might suppose that the patient has too much oxidative stress, as has been described by Schmitt.(11) However, rather than correcting the problem in a way originally described by

Schmitt, you might see if activating the patient's metabolism toward aerobic function as has been described by Maffetone (12) blocks the weakening effect of the OCL exposure. If so, this would indicate that the patient's oxidative excess was at least in part due to a lack of mitochondrial function, since the mitochondria are the best quenchers of oxidative process. For some patients, the lack of sufficient aerobic function is perhaps a more important point to identify in the overall picture of the patient's health than to try to understand if the patient has a subluxation at a certain level, or is lacking a certain nutrient.
A useful protocol is a systematic process by which to identify and gather variables that contribute to the overall impression of the patient's functional status. A useful protocol is not a programmatic abbreviated way to treat patients the same way each time, forming the total or majority of the treatment. It is more effective to focus on specificity according to the unique needs or illness process of each patient.

13. There is often more than one way to create an effect, and you can build a stronger impression of a suspected pattern if you test more than one way of creating the effect you think is relevant. For example, if you think a patient has allergies, you might see if the three immune circuits (13) all TL. You might see if antronex or bromelain strengthens. You might see if a food or mold weakens the patient, or creates a strengthening reaction that wears off after the first thirty seconds or so, indicating a shock reaction that converts to a more typical weakening effect. You might see if the patient is strengthened by a substance that helps kill off dysbiotic elements in the gut. And, you might see if these patterns are global, or are specific to a pattern of dysfunction you have identified.

Another aspect of this same principle is the use of multiple testing approaches to identify the need for a particular nutrient.(14) If you can identify five different metabolic pathways that are all impaired, and all five depend on vitamin B6 as a co-factor for their function, you have built a strong case for giving the patient B6.

14. As Schmitt has described, there are important correlations between body positioning and the neurotransmitter patterns with which they are associated. (3,4,5) These often allow you to make crucial links between a mechanical problem and the underlying chemical imbalance that may be driving it.

For example, GABA is a neurotransmitter that the body makes. It is the substance in the synapse in the tecto-spinal pathway that drives neck extensors. If extending the neck creates a strengthening effect, so will taste receptor stimulation with GABA. Both of these are ways of creating a neurologic context that involves increased representation of GABA. By extending the neck, you fire the tecto-spinal path, releasing GABA at the synapse. By taste receptor stimulation, you fire taste receptors and stimulate the brain stem directly with the specific molecular signature of GABA as received by the chemoreceptors of the tongue.

If you fix a problem that only shows up with extension (or with GABA in the mouth), you will often allow the pt to achieve a greater range of motion into extension. In this case, the problem GABA created was preventing the body from driving the tecto-spinal path, because doing so would have elevated the GABA level and made the GABA-induced problem worse. So the body avoided extension. But once you fix the problem GABA created, the body can elevate GABA levels without creating the problem.

Note that if you give this person GABA, you will be pushing his system into the problem that GABA creates, and it will get worse. This is like forcing the runner in the previous example to stand up straight and run into the shrubs.

As with the serotonin example, this issue applies to any substance that the body makes. None of these substances should strengthen a patient, unless there is a genuine deficiency, i.e. because of failure in a synthesis pathway. But they often do, and that is of great significance when you find it.

15. There are always two things to consider in a patient's

response to a substance. First is the level of the substance in the body - does the person have too much copper? Second is the extent of the patient's reactivity to the substance - Is this patient over-sensitized to copper? The example of noise sensitivity is useful. If I stay at a hotel with my wife, any noise in the next room bothers me, but doesn't bother her. I am very sensitive to noise, so even small noises are a problem for me. Two things must be addressed to complete the correction here: 1. The noise in the next room must be reduced, and 2. My sensitivity to noise must also be reduced.

If a patient is allergic to wheat, he could avoid wheat. This would help, but if the patient is not also desensitized to wheat, the corrective effect will not be as great. This would be like unplugging the appliance that blew the fuse, but not changing the fuse.

16. The neurologic desensitization referred to in #15 above creates a very useful way to assess the current significance of a problem. Suppose you desensitize a patient to a metal, copper for example. The key is to see if that sensitivity recurs. If it does, you know that there is presently a high copper level. If the sensitivity doesn't recur, you know that the elevated copper level was historical, and that what you found was the neurologic effect caused at the time the copper level was high. This would be like moving into a new house and finding a blown fuse in the circuit box. You change the fuse and see what happens. If it blows again, you know you have a problem presently in the wiring. If it doesn't blow, you know that the old owner had too many things plugged in at once, but that this is no longer a problem. Your correction (changing the fuse once) fixed the leftovers of the old problem.

This is why, in forming an impression of the patient's pattern of dysfunction, the second visit is often the most important. If you fix 50 things in the first visit, 3 or 4 may recur. These are the most important things to focus on. This is like pulling 50 weeds. The three that sprout back up are the ones with the deepest roots.

17. Touch blocks pain.(15,16) Touch, pressure, vibration, and other types of receptors are all mechanoreceptors. The activation of these receptors blocks afferent signals from pain receptors. This is pain gate theory. When you bang your elbow, you rub it, because it feels better to do so. But rubbing your elbow only feels better if there are active pain receptors there. Otherwise, rubbing there doesn't especially bring a feeling of relief. If there is enough pain input from an area to be significant neurologically, then introducing mechanoreceptor inputs (rubbing the area, for example) to block the pain will create a strengthening effect. Erasing the neurologic effect of the pain using Injury Recall Technique as described by Schmitt is especially useful here.(17)

18. If a person gets worse after a correction, you may have fixed half of the problem. You may also have forced the patient out of a compensatory pattern that was keeping another problem at bay. As with the person running next to the fence with the shrubs over the top, if you fix his back by straightening him up, you will be forcing him into the shrubs.

The patient may feel worse if you have allowed his intestines to mobilize a detoxification reaction that is now elevating the level of mobilized toxins above what the liver can handle. Or you may have strengthened the immune system to fight off an invading virus or bacterium that the system was not engaging against before, so they get the symptoms of a cold. There are many other possibilities.

19. When testing suspected allergic substances, test a strong muscle and a weak muscle. If the strong muscle gets weak, that is the typical finding that gives the impression there is an allergy. But if the patient is sufficiently allergic, one may observe that the weak muscle, and all muscles, get strong.(18) This might be interpreted as a shock reaction, created by a highly allergic reaction. If you wait 30 seconds or so, it will convert to a global weakening effect.

CONCLUSION

As with the passage of knowledge in any discipline, there are the details, and there is the conceptual framework within which the groundbreaking is done. We are privileged to be present in the formative and developing stages of applied kinesiology. It is a rare opportunity to live at a time when remarkable observations change our conceptual framework. This new framework leads to many new observations and much new detail.

The classic tendency in such a situation is to focus on the details of what has been observed. But the more important task is to understand the conceptual framework itself, and develop the skill to function within it creatively. Understanding the framework provides a context for understanding the details. It also ensures that the skills needed to continue the development of the field are disseminated as widely as possible, so that the value of the fundamental insights is preserved and allowed to flourish most fully, honoring the wisdom with which the first seeds were planted.

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Dysphagia, Esophageal Reflux, and Hiatal Hernia

RESETTING ESOPHAGEAL MOTILITY CONTROL TO RESTORE FUNCTION

Samuel F. Yanuck, D.C.

ABSTRACT

Correction of neurologic esophageal motility control has been observed by this author and others to yield significant relief of long-standing problems with the above complaints. Corrective procedures are described.

INTRODUCTION

Dysphagia, esophageal reflux, and hiatal hernia are dysfunctions either caused by or exacerbated by inaccurate neurologic control of esophageal motility.(1) In all three conditions, the patient is unable to move food down the esophagus and/or keep food or acid from regurgitating with reversal of motility. Corrective efforts centered on the neurologic control mechanisms involved appear to provide effective relief of symptoms.

DISCUSSION

People with a history of intestinal injury or dysfunction have injury recall patterns of the small and large intestines, stomach, rectum, and esophagus. Resetting these allows a restoration of normal parasympathetic control mechanisms, and prevents the normal movement of the gut from triggering old withdrawal responses that are replays of the old injury patterns. If old patterns of nociception are triggered, they are likely creating gut pain receptor activation every time the patient eats, throwing him back into sympathetic drive, exhausting the adrenals, etc.

This author has observed that a simple application of Injury Recall Technique (IRT) as described by Schmitt (2) provides effective correction of motility problems. Long-standing problems of all three types have been corrected with excellent results.

As with any application of IRT, the intent is to create a neurologic context in which the injured or otherwise aberrantly functioning tissues are activated. If the tissues are sufficiently activated, a patient initiated submaximal weakness as described by Schmitt as a G2submax (3) will result. In this case, simply have the seated patient swallow a large gulp of water. Then test their latissimus or other convenient muscle as a G2Submax (patient initiated, submaximal contraction). If there is a problem with neurologic control of motility, there will be a weakening effect observed after the patient swallows. In some cases, this will be observed immediately following the swallow. In some cases, one must wait a few seconds until the wave action initiated by the swallowing reaches the area of the esophagus which is not properly coordinated with the rest of the wave action.

Once the timing that yields a weakening effect has been identified, repeat the swallow, wait the same length of time that revealed the weakening effect, and flex the atlas-occiput articulation into forward flexion, opposing the extension withdrawal associated with withdrawal of the head away from noxious stimuli.

On some patients, this procedure must be repeated periodically. This is typically the case only if some other factor is being missed. Common factors include the need for IRT to be administered to the referred pain area for one of the digestive-related organs, or the need for IRT while the patient contracts the anus.

Patients are able to self-administer the procedure with no trouble, and can do so without fear of overdoing it.

Conclusion

The above described applications of injury recall technique provide a simple and effective method for identifying motility dysfunctions and restoring accurate neurologic control of esophageal motility.

Summary of Procedures

1. Patient fills mouth with water. Patient swallows.
2. Doctor tests intact muscle with G2Submax timing.
3. Weakness is identified with attention to precise timing after the moment of swallowing, to establish the point in the motility wave at which the dysfunction occurs.
4. Patient repeats the swallowing of water; doctor flexes atlas-occiput junction into forward flexion.

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Multiple Combined Injury (MCI) Desensitization

PRELIMINARY OBSERVATIONS ON THE DISRUPTION OF COUPLED BRAIN STEM OSCILLATORS THROUGH THE EFFECTS OF MULTIPLE INJURIES

Samuel F. Yanuck, D.C.

ABSTRACT

Multiple injuries disrupt accurate function of brain stem pattern generators. Gait and other fundamental movement patterns, which are controlled by these pattern generators, are therefore disrupted. Assessment and corrective procedures are described.

INTRODUCTION

The neurologically disruptive effects of injuries include persistence of flexor reflex afferent (FRA) withdrawal responses.(1) These FRA withdrawal responses create an overlay of efferent neurologic signaling to muscles that alters the balance of muscular control. The result is changes in the way muscles stabilize and move joints.

The simultaneous presence of multiple FRA withdrawal responses appears to have an especially disruptive effect. This appears to be a consequence of the fact that one can withdraw effectively from a single painful stimulus, but the introduction of multiple stimuli may require the body to activate FRA withdrawal responses that are mechanically awkward or impossible to carry out simultaneously. This is like the second baseman standing under a pop-up. He can handle that single stress, but when the shortstop runs over into the way, the second baseman can't handle both stresses at once, so he runs into the shortstop and doesn't catch the ball.

The primary movement patterns are gait, flexion/extension, lateral flexion, and "springing," a pattern in which all four limbs are activated at once. These movement patterns are generated in the parabrachial nucleus of the brain stem, the primary pattern generator area for all global movements.(2)

Pattern generation is based on the firing of cells in the parabrachial nucleus to initiate the activity of the limbs in coordinated sequences. Humans have four limbs. This means that human movement is based on a four oscillator system, in which each limb is one oscillator. Strogatz and Stewart (3) have described the way in which multiple oscillator systems can combine the cycling of each oscillator to create patterns. In a four oscillator system (four limbs), the possible combinations yield the primary patterns of human movement. These patterns also correspond to the movements used by animals for locomotion.

Oscillators Fired Together	Resulting Movement	Animal Gait
Both Arms then Both Legs	Flexion/Extension	Rabbit, Kangaroo
Ipsilateral Arm & Leg	Lateral Flexion	Giraffe
Contralateral Arm & Leg	Cross-crawl Gait	Human, Horse
All Limbs Fire Together	Leap	Gazelle
One Limb at a Time	Slow Four Legged Walk	"Ambling" Elephant

Figure 1. Coupled Firing of Oscillators and the Resulting Movement Patterns

In biological systems, there is a tendency for the oscillators to be regulated toward patterns of firing that are balanced. This depends on the biological system's ability to speed up firing of an oscillator if it is too slow, or slow down firing if it is too fast.

If in the human system a persistent FRA withdrawal response keeps a flexor muscle active too long when it fires, or prevents it from turning off, this overlay of activity will prevent the proper coordination of the limb involved. The result will be poor coordination of gait, flexion/extension, lateral flexion, or other more complex movements. Because withdrawal responses are often not limited to flexors (i.e. when the head withdraws to the right away from a left sided shoulder injury), the patterns of signal overlay are not limited to excess flexor activation.

It appears clinically that the body is able to adapt successfully to at most one of these patterns at a time, without encountering significant neurologic disruption. However, as the need for accurate control increases, the presence of disruptive influences from persistent withdrawal responses overwhelms the system, and proper coordination of movement is lost. Mechanical integrity is disrupted, yielding structural problems.

Discussion

In order to stress a patient's ability to coordinate patterned movement, multiple patterns are combined. Typically, having a patient perform alternating arm movements for ten seconds (a gait pattern done with the arms) does not dysregulate efferent control mechanisms (does not create a weakening effect). Similarly, having a patient perform alternating flexion and extension of the torso for ten seconds does not dysregulate efferent control mechanisms (does not create a weakening effect).

In a patient that has multiple FRA withdrawal responses, the attempt to combine flexion/extension with cross-crawling of the arms will yield a weakening effect of every muscle. The combined challenge can consist of any combination of two movements. The easiest two to combine, and the ones that show most commonly, are flexion/extension with gait of the arms. The supine patient raises the arms one at a time, bending at the elbow. As each arm comes up, the chest is raised to create torso extension. This mimics the way that flexion/extension occurs when a person walks. When walking, as the arm comes to the fullest forward position, the torso is most extended. In the middle of the gait cycle, the chest is at its most flexed position. So combining these movements on the table puts the patient into a movement pattern he encounters routinely throughout the day.

In effected patients, the weakening effect created by the combined movement appears to be quite significant in that it is of an extremely long latency. Whereas the typical weakness created by a vertebral challenge or other noxious stimulus lasts between five and ten seconds, this weakening effect has not been observed to be self-extinguishing. This author has let patients sit untreated as long as ten minutes after performing the combined movements, and returned to find that the weakening effect created by the movement challenge has not worn off. It is assumed that this represents a significant level of neurologically disruptive influence created by the challenge. This impression is supported by the observation that the patient's pattern of observed kinesiological dysfunction shifts significantly after correction to a simpler pattern more closely related to his complaint. For example, if a patient complains of a shoulder problem, the new pattern will reveal multiple weak muscles in the involved shoulder.

Once the patient has performed the combined movement pattern challenge, they will have no strong muscles. At this point, you can activate mechanoreceptors by rubbing over any or all of the patient's old injury sites, one at a time.

Those that require correction will yield a strengthening effect when rubbed, since rubbing will block any residual nociception from the area.

Once you know which injuries are involved, simply do injury recall technique as described by Schmitt, (1) but do it on two injuries together. In other words, if there are two injuries that block the weakening effect when rubbed, have the patient increase mechanoreceptor activation (TL) both injuries at once, and traction (mildly and briefly) the mortise joint on the affected side (hence the name Multiple Combined Injury IRT). If one injury is on each side of the body, traction both mortise joints. The TL is maintained while the mortise is tractioned. Injuries to the head require flexion at the A-O joint, rather than mortise traction. For convenience, an ice pack can be applied over the involved injuries, if they are in the lower legs, so the patient does not need to reach or sit up.

If there are many injuries or surgical scars, as there usually are with difficult patients, you must correct each in combination with each of the others. This usually takes under two minutes. The most this ever takes is five minutes, but high volume practitioners may have some difficulty. Be reassured that the correction only needs to be done once, and is of significant value.

The best way to keep track of multiple corrections is to start at the head with the most rostral injury, and correct it with each of the other injuries. Then it is off the list. Go to the next highest injury, and correct it with the others, leaving out the first one, since it has been done already. As you go, the list gets shorter. Using two ice packs seems to work fastest, since you can move them around the injuries while the patient lies there.

In some patients, it has been observed that the combined movement challenge will weaken all muscles but one. This muscle is the one that will be weak after the injury combinations have been corrected.

Conclusion

Proper brain stem coordination of muscular function depends on the ability to create patterned movements, and combine patterns to yield the complex movement schemes we rely on for walking and other complex movements. Disruption of brain stem pattern generators contributes significantly to structural problems. Correction of injuries in combinations appears to restore the proper function of these pattern generators, and contribute significantly to the improvement of patient function.

Summary of Procedures

1. Patient performs alternating flexion/extension of the torso. Should strengthen or do nothing. If it weakens, there is a Centering the Spine pattern, which is beyond the scope of this article. If it strengthens or does nothing, go on.

2. Patient performs alternating arm cross-crawling movements. As above, should strengthen or do nothing. Go on.

3. Patient combines flexion/extension from #1 with with cross-crawl from #2, by raising the chest when each arm comes forward. If the need for Multiple Combined Injury (MCI) correction is present, this action will weaken the patient, with a long latency (ten minutes +). In rare cases, you may need to try other combinations of primary movements.

4. Once the pattern of weakness has been established in #3 above, rub over each area that has been injured or cut (i.e. surgery). Note the ones that strengthen the patient out of the all muscles weak pattern.

5. Do IRT on these injuries in pairs, typically starting at the head and working your way down.

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GEORGE J. GOODHEART, D.C., DIBAK

RESEARCH REPORT

DR. GOODHEART'S RESEARCH TAPES

Tape 133

CEREBELLAR RELATIONSHIP TO COMMON STRUCTURAL FAULTS

The importance of the abdominal muscles in relationship to cerebellar activity is fundamental. This fundamental relationship of the cerebellum lies in the mechanoreceptor population of the ribs, including both the costovertebral and the sternocostal articular mechanoreceptor population. In addition, as you know, Guyton cites the mechanoreceptor population of the cervical column as additional cerebellar input for balance/equilibrium. The cerebellum in terms of posture is in charge of extensor muscle tone in the spinal column and elswhere. Weakness of the abdominal muscles on testing is of common occurence. This weakness may be primary, or in response to stretching the abdominals. As you know, stretching a muscle should stengthen it, not weaken it, according to O'Connel and Gardner. By the same token, contraction of an abdominal muscle to a maximum extent should certainly not weaken it, yet the work of Lawrence Jones of strain/counterstrain has, as its the A.K. diagnosis, exactly this pattern of weakness following maximum muscle contraction. The latest A.K. finding is RMAPI (repeated muscle activation patient induced) which adds further to the frequency of abdominal muscle involvement with the additional feature in the RMAPI variety of a "stupid body wisdom" element feature of muscle contraction despite the initial diagnostic value of weakness on repeated self initiated repetitive contractions. Treatment of RMAPI is origin and insertion hard heavy pressure directed from ends of muscle to center of muscle (Golgi tendon organ). Spindle cell in the belly of the muscle is spread apart. In addition to the mechanoreceptor population stimulation-deficit, (induced by aberrant rib acitivty associated with the abdominal musculature involved in rib position and movement) the loss of change of tone of the abdominals induces a cervical column component. As Raymond Dart, the great South African anatomist cites on his discussion of the part played by the abdomianls, in erect posture: "thus we get a picture , or a bird's eye view,. of the manner in which a single superficial sheet formed by these two opposed diagonal running flexion muscles in front (oblique fibers of the external oblique left and right) is continued through a deeper lying extensor sheet on each side of the spine behind to suspend the pelvis from the occiput and the neck vertebrae." As Dart continues to say "thus in a real sense, the occiput and spine of the vertebrae (cervical) suspend the body by means of two spinal sheets of muscle encircling the trunk." When the abdominals are weak, they may be by way of stupid body wisdom (SBW), literally paradoxically, pull the rib cage downwards. This pull downward (frontward) is then frequently acted upon by the body's effect to straighten itself, by pulling the cervical column backwards, sitting up, in unilateral fashion, an anterior rotation of atlas and other segments; if the resultant opposite pull action is bilateral, the resultant anterior atlas and below becomes a constant recurrence. Naturally the suboccipital triangle is no exception to this postural pattern. The common eventual result of the abdominal muscle test failure, regardless of the type of test is 1. abdominal pull causing "forward" tilt of torso; 2. a compensating backward effort of the torso causing further forward pull centering mainly at the anterior of the cervical spine; 3. additional adaptation by the posterior muscualture of the cervical spine compounding the adaptative response. The reduced movement thereby induced in the cervical spine and the corresponding lack of appropriate muscular movement of the intercostal structures of the relatively fixed ribs, reduces mechanoreceptor stimulus of the cerebellum. The change in extensor musculature by extensor cerebellar aberration adds to the confusion.

Observations of ROM both passive and active should be made in both sitting and standing posture patterns. Many times a correction made in the sitting posture maintains itself in the standing posture as well, but in some patients corrections must be repeated with the patient in the standing weight bearing position. Additional experience with this type of ROM cervical correction has shown that abdominal muscles are generally involved when the head is in the normal cervical lordotic pattern as well as the head in the cervical extended pattern. Correction of the abdominal weakness invariably increases the limited ROM in this type of patient. With the head in marked flexion, active and passive rotation also yields major limitations in ROM, both active and passive. The abdominal muscles may occasionally play a part in this type of cervical flexion sequence, but the usual cause of the limitation of ROM, with the head in flexion, is the ipsilateral quadratus lumborum. This may frequently require RMAPI investigation along with origin and insertion technique, but it may require fascial flushing or strain/counterstrain as well. Just as in the limited ROM of the cervical column discussed earlier, simple elevation of the arm above the head in both the sitting, and if necessary, standing position will reveal the side of the body that requires abdominal attention, so also there is a quick diagnostic feature for the limited ROM in the flexion position. If there is limited ROM in the flexion position, with the patient either sitting or standing, and raising the arm does not alter the limited ROM, simply incline the seated patient, or the standing patient 10-15 degrees, stabilize in that psition and reassess for improvement in the limited ROM. Naturally, all of the above is based upon a less than adequate response to the normal cervical compaction technique that is standard practice for this type of difficulty. Recall the work of Raymond Dart, the noted South African Nobel prize winner in anatomy, he states that the body is literally hung from the occiput and the cervical column. The downward pull of the relatively unsupported viscera in the weak abdominal muscle pattern is the primary problem. Just as with the abdominals, so with the quadratus, both must be corrected in the appropriate fashion.

The quadratus has an attachment to the lumbar vertebrae and 12th rib. Those fibers from the 12th rib come down diagonally and insert on the lumbar transverse processes and bodies, whereas, there is also a crosshatching of the fibers that come off of the superior crest of the ilium and then move medially to attach to the transverse processes and bodies of the lumbar vertebrae. There is a crossing of fibers from below upward and from above downward. You therefore have to pay attention to both the origin and insertion of those fibers. If flexing to the right 10-15 degrees, away from the side of limited rotation with the head in flexion, that you are contracting the right and stretching the left. GJG rarely sees a contracted left quadratus in the true sense when there is limitation of left rotation, but when you flex the patient to the right, there is an immediate alteration. Attempting to use inappropriate common sense, thinking that represents stretching a muscle that is already contracted, if you try to release the quadratus, it makes the cervical ROM all the more greater. Correction of the quadratus is also useful in cases of restriction of cervical lateral flexion with no rotation. Lateral flexion limited to one side, take the patient away from that side, laterally flexing 15-20 degrees, and retest cervical lateral flexion. As long as the patient is in the trunk lateral flexion, there will be an increase in cervical lateral flexion. This means that the side opposite that which you moved the patient is the RMAPI quadratus.

Key feature to the RMAPI is that is doesn't show up on the TS Line until you do the repeated muscle activation, and then the TS Line will show up for about 60 seconds and then goes away again.

ISCHIOFEMORAL LIGAMENT

We may not examine patients in the appropriate position. Patients often say that they have pain when they stand, but not so much pain when they walk, or they have pain when they stand that improves when they sit, or if they have sciatic pain, it may improve when they lie

down, or not diminish with change of position. GJG wondered at the vagueries of these observations. He has had trouble correlating spinal length to the complaint of the patient. GJG measures spinal length of all patients, from the tip of the coccyx to the base of the skull (junction of C1 and EOP), sitting, standing, and lying. A general rules is: the longer the spinal column is in length past the normal 14 mm difference, the more frequently will the pain exist in that position. For instance, if they are longer standing, the odds are they will have more pain when they stand. If they are longer sitting, they will have pain sitting. But that is not an absolute rule and GJG has not fully understood it.

GJG measures leg length, palpates the Achilles tendon, as we all do, looking for general information. Recently at the Chiropractic Centennial, there was a table specially constructed to allow unrestricted movement of limbs in such a way that the table sections could slide in such a way that any sight movement of the limb getting longer or shorter could take place. The paper presenter was able to show that turning the head had an effect on the length of the limb in some patients. How do we apply this information?

GJG has observed that patients negative in the sitting position for PLUS pattern, may show a difference in leg length when they go from the supine to sitting position, one limb becoming longer than the other. Place your thumbs on the medial malleoli to measure. This difference can be up to half an inch. It is obvious that this can't be movement of the sacroiliac joint which moves in fractions of millimeters, it has to represent changing muscle tone producing evidence of a posterior ilium or posterior ischium, with the resulting efforts of the muscles to change it. Sometimes you can use the classic observations when one makes for total value of limb length, i.e. Hoppenfeld. We are not talking about a patient with an obvious osseous difference. The difference in leg length from supine to sitting has been meaured via Metrecom to be sure what he was seeing was actually so. Some patients show up to a half inch difference. They will be negative for TL of the sacroiliac joint for a Category II and Category I. However, TL of one sacroiliac joint with the opposite leg raised about 10 inches in a gait-type pattern will be positive.

Will only show on one side. This indicates a disturbance in the sacroiliac joint in the sitting position and it is "out of the loop." The body does not report it until you move the opposite leg. The sacroiliac joint will also TL positively if you have the patient close his eyes. It's as if going back to the alpha rhythm of the brain, similar to the Sleep vs. Awake pattern, makes it show up. Removing the hand from the sacroiliac joint negates any weakness with the eyes closed.

If the limb appeared short upon sitting, there should be pain upon palpation of the medial thigh (adductors), upper half of Poupart's ligament, first rib head, all on the same side, and only in the sitting position, all of the classic signs of a posterior ilium. If the limb lengthens, there will be pain on the lateral lower one-third of the thigh, lower groin, and first rib head. Make a mechanical adjustment to the sacroiliac in a side lying position. Make any respiratory corrections as well. If the positive TL to the sacroiliac joint is negated by inspiration or expiration, make the appropriate correction to the ilium on the appropriate phase of repsiration. Reassess the limb length when the patient goes from supine to sitting.

GJG also measured the ability of the patient's leg abduction and adduction. Crossing the leg at the knee in a Patrick Fabere position will reveal that one knee is parallel to the floor and the other knee is at an angle to the floor, with the knee being higher. The higher knee correlated to the side that the patient would walk with the toe pointed out. Many people walk with the left foot straight ahead and the right foot toeing out. This is associated with a dropping of the pelvis on the same side, going inferior at the symphysis. GJG tried testing the gastrocnemius and posterior tibial for RMAPI weakness, etc. and found nothing that would affect the toe out. GJG checked hip adduction by crossing the leg over the opposite knee. He found that the left leg adducted

well, but the right leg did not adduct well, it was restricted. He could not find a muscular reason for this, except an occasional quadratus. The ischiofemoral ligament on the side of the restricted adduction and the side of the toe out was in a hypercontracted state and required origin-insertion technique. The ischiofemoral ligament comes off the posterior portion of the ischium and bridges itself across the neck of the femur and attaches itself to the anterior portion. When it is tight, it externally rotates the limb and gives the appearance of the toe turning out on that side. Sometimes GJG uses the treadmill on a slow speed and uses the television monitor so that the patient can observe the toe out. With the rare exception of the quadratus, GJG was powerless to correct the toe out until he started to release the ischiofemoral ligament. The treatment to the ligament requires quite heavy pressure acting as if the ligament were a muscle, taking the ends of the ligament and pushing away from the center. This would produce a remarkable increase in the leg adduction.

The ischiofemoral ligament tightness does not always accompany the side of the sitting sacroiliac disturbance, but does accompany the side of the toes out. GJG sees a high frequency of tight ischiofemoral ligaments on the right side.

The ischiofemoral ligament runs from a portion of the ischium adjacent to the femur and then runs to the neck of the femur. The ischiofemoral ligament has a considerable portion of it on the anterior portion of the femur. Think of the ischium in its position relative to the anterior portion of the femur, and when the patient goes to sit up, the most posterior part of the ischium keeps moving further away from the anterior portion of the femur. That process of movement will make one limb change its position. If the ligament is tight, that limb will start to appear short in the position that assumed by the patient sitting up. The ischium keeps moving posteriorly and superiorly, the origin is moving further away from the insertion. The femoral head will sometimes accommodate to that and move in a posterior superior direction, but many times will not and will result in a change in limb length, depending upon the relative hypertonicity of the ischiofemoral ligament. This sometimes produces a paradoxical situation where it looks like there is a sitting sacroiliac joint disturbance, but following TL with the opposite leg raised or with the eyes closed, will not indicate any disturbance in the sacroiliac joint. That will be the side of the tighter leg adduction, toe out with walking, tight ischiofemoral ligament.

If the patient still reveals a toe out on the treadmill after correction of the ischiofemoral ligament, you can also stretch the ischiofemoral ligament by attempting to move the attachment of the femur further away from its attachment to the ischium. Maintain your contacts on the ischium and femur ends of the ligament and pull apart, and at the same time internally rotate the femur to stretch the ligament. You can have the patient supine with the knee flexed and use your elbow to internally rotate the femur. The combination of releasing the ligament and then stretching it is very useful

If you think of the ligament stretch adrenal problem in the ischiofemoral ligament, you can see why the femoral head ligament of itself not causing much disturbance, frequently will cause reflex disturbance in the sacroiliac joint, sacral-lumbar joint, and as high up as the cervical spine, which is sometimes very enigmatic and hard to understand.

CARDIOPLUS

Observations regarding patients with mild states of congestive heart failure, or disturbances in heart rate, or any other of the variety of reasons that focuses on the heart, especially if the phonocardiographic tracing shows a diminished rest period with the first sound and second sound spaced almost evenly, the second sound should ordinarily be tucked up close to the first sound, it should have a one-third, two-thirds relationship. When the second sound keeps moving away from the first sound, the rest period of heart is diminished. GJG has noted that cardiotrophin is a useful product to change this and gives the patient much more ease and less shortness of

breath. Patient is usually also on medications from their internists. In some patients, cardiotrophin did not work as well, so the companion product that contained the heart muscle substance as well as the vasodilating effects, called cardioplus. Some patients that took cardioplus were pleased because it worked better than the cardiotrophin. The cardiac muscle may have broken down and may have needed the protomorphogen to cancel the antibody (protomorphogen hypothesis). When it did not work, the cardioplus, which contains G, E, and C, in addition to the heart muscle substance, many patients improved. The second heart sound would tuck up closer to the first heart sound, there was more rest time, and the heart got its blood supply.

Many patients remarked about how the cardioplus helped to stabilize their blood sugar if they were a maturity onset diabetic or insulin dependent diabetic, and even a hypoglycemic patient. Cardioplus appears to help not just the heart, but all muscles, and has a tendency to balance out the blood sugar by increasing the muscle demand and improves tissue tone by the effect on the vascular muscle and arterial wall. Cardioplus is not new to GJG, he first learned of it in a nutritional manual published by Standard Process when Dr. Lee was still alive. There can be insulin resistance, which means the insulin receptors are plastered over. It's like ordering room service and then not opening the door when the food comes. The muscle can refuse the blood sugar or refuse the amount that is available or has been ordered. The same is true with fat. Aerobic (slow twitch) muscles burn fat and anaerobic (fast twitch) muscles burn glycogen. Sometimes the muscle will refuse the fat or glucose.

Myoplus is the same product by another name if you don't want the fear reaction in the patient of "heart."

By trial and error, GJG found that cardioplus will improve range of motion in difficult neck torsion problems, especially as described at the beginning of this tape. You may find the abdominal muscle as an RMAPI pattern when the patient has difficulty with cervical rotation with the head in flexion. Some patients responded well to the cervical compaction and the origin-insertion of the abdominal muscle, but a certain percentage of patients continue to have limitation of rotation. This is often found in elite athletes who are complaining of arm, shoulder, neck, and hand problems. One particular tennis player had a limitation of rotation to the left which resolutely resisted any effort on GJG's part to help it. An RMAPI pattern was negated with myotrophin, but there was no change in the cervical range of motion. The cardioplus made the immediate increase in range of motion. GJG theorizes that the skeletal muscle must undergo some sort of a change which yields this type of result. This may be hooked up with the tyrosine-specific kinase enzyme that is part of the utilization of glucose.

Patients who are hyper- or hypo-glycemic, or patients with difficult range of motion problems, should be tested against RMAPI cardioplus/myoplus.

BLUE GREEN ALGAE

GJG is in the process of testing blue green algae in the liquid and capsule form. His initial impression is that it is good stuff. The network marketing of it is not to his liking, so any income derived from it goes to ICAK, and he has a federal non-profit ID number. It comes from Oregon. Looks to help basic nutrition.

INDEX