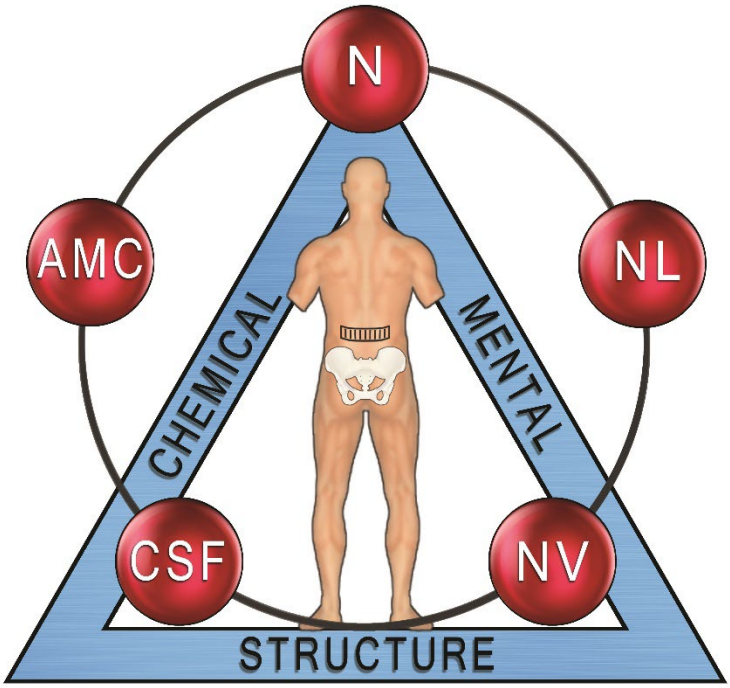

INTERNATIONAL COLLEGE OF APPLIED KINESIOLOGY U.S.A.

Experimental Observations of Members of the ICAK

Volume 1, 2024 - 2025

Seventy-Fifth Collection of the Proceedings of the Annual Meeting

International College of Applied Kinesiology® – U.S.A.

Experimental Observations of the Members of the ICAK

Volume I, 2024-2025

Proceedings of the Annual Meeting

International College of Applied Kinesiology® – U.S.A.

Experimental Observations of the Members of the ICAK

Volume V, 2024-2025

Proceedings of the Annual Meeting

Presented:

July 25-28, 2024

Publications Staff:

Angela Capra, Executive Director
Katy Stuckey, Membership & Publications Manager

Message from the Chairman

Dr. Richard Belli, D.C., D.A.C.N.B., F.A.B.N.N.

As we continue to move past the pandemic it has become more important than ever for members of the International College of Applied Kinesiology®-U.S.A. to share their insights, outcomes, case histories and research through the papers presented in these Proceedings.

This year we continue our in-person Homecoming. We welcome the opportunity to be together and share what we have learned over the last year. As we all know, there is as much learned in the breakrooms and hallways as there is in the conference.

It continues to be our hope that the Homecoming, along with these published works, document the first steps toward furthering the application of applied kinesiology in diagnosis and clinical skills ultimately becoming the part of the accepted body of knowledge we embrace. We invite and encourage all members to participate in contributing to and expanding upon the basis of neuro-functional muscle testing we call applied kinesiology. Your clinic is your laboratory, your patients the source of unlimited observation and whether a case or double-blind study, they all add to the knowledge base.

We are pleased to have the opportunity share with the members of ICAK-U.S.A. the advances and successes of this year. It is truly a gathering of academic excellence and clinical genius. Thank you and congratulations to all of you who have taken the time to contribute.

A special thanks to Drs. Noah Lebowitz, Dylan Miller and Nick Sorochinsky for your time and knowledge in helping to produce this publication.

With great excitement we look forward to seeing you and sharing at this year's ICAK-USA Homecoming.

Introduction

This seventy-fifth collection of papers from members of the International College of Applied Kinesiology®-U.S.A. contains thirteen original papers written by eight authors. 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 *Proceedings* Review 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.

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 dialogue, creative thinking and critical review among its members; thus, review in this instance is not blinded. These papers are distributed only to the members of the ICAK-U.S.A. for general comment and 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 more in-depth study and scientific investigations, as well as spawn new areas of research. Such is to inspire 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) and the editor(s). The ICAK-U.S.A. disclaims any responsibility or liability for such material.

The current ICAK-U.S.A. Status Statement appears in *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 will be published and identified in the table of contents as failing to conform. Whenever possible, all papers should be supported by statistical analyses, literary references, and/or any other data supporting the procedure.

Manuscripts are accepted by the ICAK-U.S.A. for publication with the understanding that they represent original unpublished work. Delivery of a manuscript to the ICAK-U.S.A. Central Office does not imply it will be published in the Proceedings. Manuscripts are reviewed by the Proceedings Review Committee and authors will be notified in a timely manner of their manuscripts acceptance or rejection. The author may appeal any paper rejected to a separate committee composed of members of the Publications and Research Advisory Committees. The decision of this committee on publishing the paper will be final.

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.

All manuscripts (meaning any material submitted for consideration to publish) must be accompanied by a properly completed *RELEASE FORM*, signed by all authors and by any employer if the submission represents a "work for hire." Upon such submission, it is

to be understood by all authors that no further dissemination of any part of the material contained in the manuscript is permitted, in any manner, without prior approval from the editor; nonobservance of this copyright agreement may result in the cancellation of the ICAK-U.S.A.'s consideration to publish.

Continuing call for papers includes:

Research studies (Investigations)—reports of new research findings pertaining to the enhancement of factors of health, causal aspects of disease, and the establishment of clinical efficacies of related diagnostic and therapeutic procedures.

Hypotheses—projections from previous observations that may establish a solid basis for further in-depth investigations.

Literature reviews—critical assessments of current knowledge of a particular subject of interest, with emphasis on better correlation, the identification of ambiguities, and the delineation of areas that may constitute hypotheses for further study. Meta-analyses are included here.

Clinical procedures—succinct, informative, didactic papers on diagnostic and therapeutic procedures, based heavily on authoritative current knowledge.

Case reports—accounts of the diagnosis and treatment of unusual, difficult, or otherwise interesting cases that may have independent educational value or may contribute to better standardization of care for a particular health problem when correlated with similar reports of others.

Case reviews—a retrospective comparative assessment of the diagnosis and treatment of several cases of a similar condition i.e., the comparative evaluation of two or more case reports.

Technical reports—the reporting and evaluation of new or improved equipment or procedures, or the critical evaluation of old equipment or procedures that have not previously been critically evaluated.

Commentary—editorial-like, more in-depth essays on matters relating to the clinical, professional, educational, and/or politicolegal aspects of health care principles and practice.

Critical review (Letters to the editor)—communications that are directed specifically to the editor that critically assess some aspect of the ICAK, particularly as such assessment may add to, clarify, or point up a deficiency in a recently published paper; authors are afforded the privilege of a counter-response.

The following editorial policies will apply:

Informed consent—Manuscripts that report the results of experimental investigations with human subjects must include a statement that informed consent was obtained, in

writing, from the subject or legal guardian, after the procedure(s) had been fully explained with documentation that such procedures have been fully understood. Photographs or artistic likenesses of subjects are publishable only with their written consent or the consent of a legal guardian; the signed consent form, specifying any special conditions (e.g. eyes blocked off), must accompany manuscript.

Patient anonymity—Ethical and legal considerations require careful attention to the protection of the patient's anonymity in case reports and elsewhere. Identifying information such as names, initials, actual case numbers, and specific dates must be avoided; other identifying information about a patient's personal history and characteristics should be disguised.

Authorship—all authors of papers submitted to ICAK-U.S.A. must have an intellectual stake in the material presented for publication. All must be willing to answer for the content of the work. Authors should be willing to certify participation in the work, vouch for its validity, acknowledge reviewing and approving the final version of the paper, acknowledge that the work has not been previously published elsewhere, and be able to produce raw data if requested.

Conflict of interest—in recognition that it may at times be difficult to judge material from authors where proprietary interests are concerned, authors should be prepared to answer requests from the editor regarding potential conflicts of interest. The editor makes the final determination concerning the extent of information released to the public.

Acknowledgments—Illustrations from other publications must be submitted with written approval from the publisher (and author if required) and must be appropriately acknowledged in the manuscript.

Author responsibility—Manuscripts accepted for publication are subject to such editorial modification and revision as may be necessary to ensure clarity, conciseness, correct usage, and conformance to approved style. However, insofar as authors are responsible for all information contained in their published work, they will be consulted if substantive changes are required and will have further opportunity to make any necessary corrections on the proofs.

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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.

All manuscripts (meaning any material submitted for consideration to publish) must be accompanied by a properly completed *RELEASE FORM*, signed by all authors and by any employer if the submission represents a "work for hire." Upon such submission, it is to be understood by all authors that no further dissemination of any part of the material contained in the manuscript is permitted, in any manner, without prior approval from the editor; nonobservance of this copyright agreement may result in the cancellation of the ICAK-U.S.A.'s consideration to publish.

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Manuscript preparation

Authors are requested to submit final manuscripts via email to icak@dci-kansascity.com. Each manuscript file should be titled with the author's last name and the manuscript title. All manuscripts must be submitted in Microsoft Word.

The ICAK-U.S.A. does not assume responsibility for errors in conversion of customized software, newly released software and special characters. Mathematics and tabular material will be processed in the traditional manner.

Approved Manuscript Style

Manuscripts submitted for consideration to publish in *The Proceedings of the ICAK-U.S.A.* must be compiled in accordance with the following instructions, and manuscripts
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not so compiled are subject to return to the author for revision. The manuscript template is listed on the next page.

Summary of Requirements

Type the manuscript single-spaced, including title page, abstract and key words, text, acknowledgments, references, tables, and figure legends. (Note: footnotes should be avoided by including any necessary explanatory information within the text in parentheses). Do not break any words (hyphenate) at the end of any line; move to the next line if entire word does not fit.

Detailed Preparation Procedure

Units of Measurement—In most countries the International System of Units (SI) is standard, or is becoming so, and bioscientific journals in general are in the process of requiring the reporting of data in these metric units. However, insofar as this practice is not yet universal, particularly in the United States, it is permissible for the time being to report data in the units in which calculations were originally made, followed by the opposite unit equivalents in parentheses; ie, English units (SI units) or SI units (English units). Nevertheless, researchers and authors considering submission of manuscripts to the ICAK-U.S.A. should begin to adopt SI as their primary system of measurement as quickly as it is feasible.

Abbreviations and symbols—Use only standard abbreviations for units of measurement, statistical terms, biological references, journal names, etc. Avoid abbreviations in titles and abstracts. The full term for which an abbreviation stands should precede its first use in the manuscript unless it is a standard unit of measurement.

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Acknowledgments — Acknowledge only persons who have made substantive contributions to the study itself; this would ordinarily include support personnel such as statistical or manuscript review consultants, but not subjects used in the study or clerical staff. Authors are responsible for obtaining written permission from persons being acknowledged by name, as readers will infer their endorsement of the data and conclusions.

Only those references that actually provide support for a particular statement in the text, tables, and/or figures should be used. Excessive use of references should be avoided; normally, 1 or 2 authoritative references to support a particular point are sufficient. A short article of up to 5 or 6 manuscript pages may be adequately supported by 5 to 10 references; longer articles of up to 20 pages by 15 to 25.

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- icak@dci-kansascity.com
-Author selects Section I or Section II (most papers fall in these two categories) -The Proceedings Review Committee then evaluates each paper for criteria and sends suggestions back to the author for final corrections by April 15th.
-Final Manuscripts(papers) are resubmitted back to central office by May 1st of each year, where Proceedings Review Committee will vote for the two award winners.
-David Walther Award goes to the "best overall" AK related paper (Section I only).
-Alan Beardall Memorial Award goes to the "most creative" AK related paper (Section I only).
-Awards will be presented at the Annual Homecoming Meeting

Abstract (24pt bold)

The abstract is listed here. Do not indent. Paragraphs are separated by a return. (12 pt font)
-150-250 words.
-A Brief, concise, informative summary of the main findings and conclusion of the study.
-Gives readers a quick, easy understanding of the main points of the paper.
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-Clearly State the purpose of the article. Summarize the rationale for the study or observation.
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Conclusion (24pt bold)

The conclusion is listed here. Do not indent. Paragraphs are separated by a return. (12 pt font)
-After Conclusion, can add an "Acknowledgements" heading before References.

References (24pt bold)

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2. There should be a return in between each reference.

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Authors are requested to submit final manuscripts via email to icak@dci-kansascity.com. Each manuscript file should be titled with the author's last name and the manuscript tile. All manuscripts must be submitted in Microsoft Word.

The ICAK-U.S.A. does not assume responsibility for errors in conversion of customized software, newly released software and special characters. Mathematics and tabular material will be processed in the traditional manner.

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 J. 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 AK 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 (microavulsion 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 pre-conceived impressions regarding the test outcome
- Non-painful contacts -- non-painful 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 a 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 AK 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.

Approved by the Executive Board of the International College of Applied Kinesiology–U.S.A., June 16, 1992. Updated May, 2001.

Table of Contents

Informal Papers

Experimental Observations of Members of the ICAK

Volume 1, 2024-2025

Five Types of Switching

Paul T. Sprieser, D.C., DIBAK

Abstract

This paper is an attempt to state a clear understanding of neurological disorganization also known as Switching, and its five forms. This condition is extremely important in the practice of Chiropractic/Applied Kinesiology, and any other health care system that use Manual Muscle Testing (MMT) to gain diagnostic and therapeutic information for the patients' bodies. I will make the statement that everyone is switched! I also want to state that there are five forms of neurological disorganization or switching and most patients have at least two forms on every visit.

Introduction

The subject of switching first appears in Dr. Goodheart's, Applied Kinesiology Workshop Procedure Manual in 1970.[1] It is under the heading of Cross-Crawl, and the fact that 85% of the population is right-handed and has a dominant cortical hemispheric dominance of the left brain. He refers to Carl H. Delacato, E.D., The Diagnosis and Treatment of Speech and Reading Problems.[2] He recommends the treatment of K27 bilaterally and umbilical CV8 point with a firm rubbing pressure. In the 1975 Procedure Manual on page 28 under the heading Use of K27 umbilical contacts routinely on all patients to correct switching.[3] A healthy person's muscle functions should be strong when tested in a predictable manner. This is appropriate in testing muscles and analyzing the normal walking contralateral patterns that are produced in weight bearing and foot proprioception to activate or inhibit muscles.

Goodheart states this in the 1975 AK Workshop Procedure Manual on page 28, under the heading: Use K27 umbilical contact routinely on all patients.[4] In Walther's first book on Applied Kinesiology-The Advanced Approach in Chiropractic in 1976, under the heading Connections: K27 is an alternator which allows the flow of energy to one side of the body or the other, especially in flexion or extension of the lumbar spine. K27 is classified by the Chinese in classic acupuncture as the "Home of Associated Points", it is the associated point for all associated points.[5]At this point in time the introduction to therapy localization (TL) also took place. Goodheart spoke of switching with TL to both K27 points as a positive finding for switching. His description follows as "occasionally we will find indications that there should be weakness on one side, where the weakness shows up on the other side".

My interest in neurological disorganization or switching stems from my involvement with AK and my first Introduction to Dr. George Goodheart in June 1968 at the American Chiropractic Association (ACA), national meeting just prior to my graduation in August 1968. I have currently published seven papers on this subject in the Collected Papers of ICAK from 2001 through 2014. What I have discovered that there are five forms of switching or neurological disorganization.

Discussion

The idea of Neurological Organization had come about due to Dr. Goodheart reading of the book by Carl Delacato, Ed.D., "The Diagnosis and Treatment of Speech and Reading Problems", which was published by Charles C. Thomas Publishing in 1963.[2] This was a publication of 25,000 copies from 1963 to 1974. The book covers the Neurological Organization concept of how this connects to language problems due to injuries to the brain and spinal regions. It covers some anatomy of the nervous system and cortical hemispheric dominances and its importance to being able to learn to read and speak.

Goodheart presents this information in an article that appears in Chiropractic Economics titled "Cross-Pattern Crawling and Muscle Spasms"[6], He brings this in the 1970 Workshop Procedure Manual under the heading of Cross-Pattern Crawling. He ties it together in 1975 with Therapy Localization (TL) to K27 with muscle testing causing a strong indicator muscle to weaken. He suggests that all patients K27 and umbilicus (CV8) should be treated with a firm rubbing pressure for 20 or more seconds.

This part of the information on switching I review from Walther's Applied Kinesiology Vol.1: Basic Procedures and Muscle Testing, 1981. Evaluation for switching page 134, listed under the following-1. Acupuncture point K27, 2.-Governing and Conception Vessels points CV24 and GV27 and the Associated point at Bladder 16, located close to T6 and T7, 3.. Ocular Lock, which became Crossed K27. Finally, the Auxiliary K27 is mentioned with it location adjacent to the transvers process of T11 vertebra bilaterally while simultaneously stimulating CV8.[7]

These are the following statement of importance: "The evaluation for switching should continue throughout the course of a patient's treatment". "If switching recurs on subsequent visits, the physician should evaluate further to determine the cause". Ideally, once switching is corrected it should never return unless the individual experiences trauma of either a structural, chemical or mental nature. The subject of switching has been in AK for 53 years and the PRY-T has been 43 years. The statement by Walther had changed from stimulating K27 and CV8 at the start of all visits to try to find the reason for switching in Synopsis in 2000.[9] What I have learned is the source of standard switching is dural tension or dural torque. PRY-T is a method of diagnosing and treating meningeal irritation (mechanical meningitis), Yaw #2 is the source of standard switching 99% of the time and the remaining 1% is Yaw#1 and Pitch.[10]

1. Standard Switching- The original form with TL to both K27 right hand to the right and left hand to left causing an indicator muscle weaken. This is almost universal form present in 99% of patient we examine. This form has to do with the information being transmitted back and forth to the right and left cerebral cortex by way of the corpus callosum. This is the source of all subtle energy patterns described by Paul White, DC in "Figure 8" as well as John Diamond, MD, presented in his book Behavioral Kinesiology (BK).[11]
2. Cross K27 Switching-Ocular Lock-The patient TL's K27 with the right hand to the left K27 and the left hand to the right K27. Goodheart had associated this with a weakness when the patient is asked to read a standard line of text from left to right that does not occur when read backwards from right to the left. He called it the B'nai B'rith Syndrome referring to the language of Hebrew which reads from right to the left. I stated in a

research paper that the three languages are Arabic, Hebrew and Japanese. I said that I did not know if this is produced by how the person learned to read or how we as humans are wired.

The **original switching** and the **ocular lock or cross K27 switching** were corrected with firm stimulation of both K27's and umbilicus or CV8 for at least 20 or more seconds. What I had found and present in research paper, is that original switching was due to dural torque of the yaw#2 pattern at nearly 99% of cases, leaving 1% from the pitch pattern or yaw#1. The ocular lock pattern was connected to the learning disability cranial fault **(LDCF),** that I discovered in 1975 and the cross K27 was corrected while teaching an AK course in 2007. Correction of the LDCF with pressure upward at the cruciate suture and downward on the vertex of the skull during inspiration corrected ocular lock.[12]

3. Lateral Atlas-HO Tendon-Musculo Meridian. The third switch pattern is almost universal and is therapy localized using the thumb contact to the transverse process of C1. This nerve root is only motor and not sensory in nature. The location is anterior to the mastoid process and posterior to the ramus of the jaw, in a little depression. TL to the transverse of C1 with the right thumb to the left transverse and the left thumb to the right transverse is positive for bilateral anterior subluxation of C1.[13]

My reason for suggesting this as switching factor is the following. If you check leg lengths first supine and the in the prone position, without correcting the lateral atlas subluxation you find the longer leg supine will become the short leg in the prone position. The effects are similar to those seen in standard switching pattern.

4. Ionic Switching refers to an imbalance of air flow through the nostrils of the nose. Have patient occlude the left nostril breathing in and then exhale on the same side, then occlude the right nostril breathing in and then exhale on the same side. If a weakness occurs to the indicator muscle we have ionic switching. It is treated by stimulating GV1 tip of coccyx and CV8 umbilicus simultaneously for 20 seconds. This will correct the ionic switching, which occurs in a small percentage of patients, maybe 10%.[14]

5. Therapy Localization Overload Phenomena or (TLOP). I discovered this form of switching in 1976 and published it in 1978 Collected Paper of ICAK. Have the patient TL the temporomandibular joint one or both sides without activation of the muscle of mastication. If TLOP is present a weakness of the indicator muscles will occur. This will cause myriad of strange patterns such as a non-challengeable ileocecal valve neither open nor closed, but a positive TL to Mc Burnie's Point. Also, a presence of both Category #1 and Category #2 at the same time will be found. These patterns are the classic form of TLOP Switching. There are other positive patterns too numerous to mention here.[15] Correction and treatment is the positive TL side of the TMJ. Move slowly downward to ST7. It will cause a weakness of the indicator muscle using inspiratory assist at this point with a thumb contact with a light thrust forward and then using the golgi tendon pulled apart and spindle cell pressed together in a direction that weakens will correct the problem. The normal challenge patterns will return for open or closed ICV and the Category will show as either 1 or 2.

Conclusion

The fact that Neurological Disorganization or Switching leads to mistakes being made such as side of muscle weakness, pelvic categories, leg length, as well as cranial faults and challenges it is important to avoid these situations. If the nervous system is not communicating information correctly it will lead to more serious systemic conditions that could cause organic disease. Dr. Goodheart's statement about the nervous system would seem to be true "God Will Forgive You, Your Nervous System Will Not".

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Applied Kinesiology Management of Acute Abdomen Pain

Christopher J. Devens, D.C.

Abstract

Objective
To explain the application of Applied Kinesiology in the management of a 29-year-old female patient experiencing acute-severe abdomen pain.
Clinical features
The patient presented with acute-severe pain to right upper abdominal quadrant of three weeks.
Intervention & Outcome
Examination and treatment utilizing Applied Kinesiology methods was successful with complete resolution of all patient symptomatology.
Key Indexing Terms
Applied Kinesiology, Abdomen Pain

Introduction
Acute abdomen is a term healthcare providers use to describe sudden, severe abdominal pain that may require urgent treatment in rare instances. Surgical reasons may include extreme blood loss, severe infection, blood flow blockages, major obstructions, and perforations. However, acute abdomen pain also is often a symptom of nonsurgical conditions which may include endocrine and metabolic disorders, digestive dysfunction, allergic reactions, poor dietary habits, toxins, or drug side effects. Acute abdomen pain can affect anyone. It is estimated that abdominal pain accounts for approximately 7-10% of emergency care visits each year. (1)

Medical treatment for non-surgical acute abdomen pain varies based on suspected cause. Typical medical treatment may include: stabilizing vital signs, replenishing lost fluids/electrolytes, broad spectrum anti-biotics and pain-relievers, anti-emetics, dietary restrictions, hot packs, and antacid medications for heartburn or gas pain. (1)

Since Applied Kinesiology's (AK) introduction by Dr. George Goodheart in 1964, AK has contended that structural, chemical, and/or mental-emotional instabilities of the body lead to disease processes. Characteristic of AK is the use of manual muscle testing procedures to assist in the diagnoses of structural, chemical, and/or mental-emotional aspects of disease while also helping determine the effectiveness of its treatments. (3) This study looks to report results of both diagnostic and therapeutic treatment directed by AK ideologies.

Discussion

A married 29-year-old female presented with severe acute abdomen pain located in her right upper quadrant. She recently gave birth ten months prior to a boy, whom she is currently nursing. Her acute abdomen pain started suddenly during late evening three weeks late ago. Pain has recently worsened the past few days as it becomes extremely sharp and intense once or twice daily. When pain feels the worst, she rates the intensity level at 10+/10, with 10 being the worst. Typical pain throughout the day is said to be a constant 3/10 pain level. Although pain mainly localizes to her upper right abdominal quadrant, it may also be felt diffusely around her abdomen region. Last week, on two separate days, she experienced "shooting" pain into her right lateral and posterior ribcage areas. Intense right upper trapezius cramping was also noticed. It is extremely difficult and painful to sleep on her right side and she avoids it completely. She experiences intermittent low grade dull headaches to her right temple that she rates at a 3/10. They typically last for a few hours at which they self-resolve. Her bowel movements are irregular as she suffers constipation, straining, and poorly formed stools that have become "ball-like."

She has a history of diffuse intermittent right sided chest pain for the past year. She occasionally sought treatment by a naturopath being prescribed herbal remedies for what she was told was "Gall Bladder trouble." She reports her pain or frequency was never fully resolved, but did experience a mild relief in symptomatology allowing her to "live easier with the pain."

- **Health & family history** revealed poor eating habits of frequent fast foods and daily consumption of soft drink beverages. She does not exercise. Her mother had a cholecystectomy at 35 years of age. She is a non-smoker.
- **Physical examination** revealed the following: weight 164 lbs.; height 5'6"; blood pressure supine 132/78, standing 132/76; pulse 72. Murphy's test positive. Right thumb web positive. Tongue examination reveals engorged veins under tongue.
- **Postural evaluation** revealed level occiput, elevated right shoulder and scapula, level iliac crests, bilateral knee hyperextension, and excess right foot supination
- **Initial muscle palpation** revealed moderately severe palpatory tenderness to the right upper abdominal quadrant, moderate tenderness on the right origin/insertion points of the tibialis anterior and peronei brevis/tertius, and severe tenderness of the medial right knee with Jump Sign observed.
- **Manual Muscle Testing** revealed inhibited right tibialis anterior and peroneus brevis/longus, right popliteus, left psoas, and right lower trapezius.
- **Joint challenge mechanisms** revealed subluxations at T12 posterior, sacrum posterior, right occiput, and right lateral talus.

Pulse point analysis of the meridian system was utilized initially. (3) The Gall Bladder/liver pulse point tested positive and evaluation determined gall bladder meridian weakness from right popliteus (gall bladder association) inhibition whereas bilateral pectoralis major sternal (liver association) tested normal.

Alarm points were then investigated to determine which median may neurologically strengthen the weak right popliteus. (3) Gall Bladder alarm point was tested first followed by the liver, heart, triple warmer, and pericardium alarms points. This was performed in precise order in accordance to AK meridian system procedures regarding alarm point, contralateral alarm point, coupled alarm point, midday-midnight pair alarm point, and superficial energy flow evaluations. All points were found negative as no observable change, or strengthening of the right popliteus muscle was noticed. The five-element system was next employed which resulted in strengthening of right popliteus muscle (wood element) by means of the bladder alarm point (water element). (3)

Treatment of the deficient Gall Bladder meridian system by utilization of a teishin instrument was then performed by stimulating water command point 43 on the excess bladder meridian. This was followed by adjusting the correlating associated point (sacrum) in a posterior-to-anterior vector. The Lovett brother for sacrum, the occipital bone, was also adjusted on the right, followed by right lateral talus. Treatment and activation of the neurolymphatic and neurovascular reflexes were performed on the right tibialis anterior/peronei, popliteus, and lower trapezius muscles. It was found that oral insalivation of cranberry supplement and vitamin A (2) also strengthened weak indicator muscles and increased range of motion prior to meridian treatment. Supplements were recommended to be consumed at each meal for increased support. Additionally, it was recommended to avoid fast food, soft drinks, dairy, and alcohol.

The patient returned in 14 days and reported a profound decrease of abdomen pain. She stated since her initial visit, her typical daily pain level lowered to a 1/10 and during half the days she experienced zero abdomen pain. Her worst pain level, which also drastically decreased, reduced to a 5/10 pain rating. These occurrences also significantly reduced from experiencing daily to having decreased to two occurrences in 14 days—each time after consuming fast food. She stated since her pain decrease, she has been able to start sleeping on her right side for brief periods of time. However, after a couple hours increasing discomfort would again force her to change body position.

Reexamination using AK methods was again performed on her second visit which revealed the following: normalization of prior neurologically inhibited muscles including right lower trapezius, right tibialis anterior, right peroneus brevis, and left psoas. Blood pressure improved to 124/72 seated. Murphy's test was negative and deep palpation of right thumb web yielded no pain. Headaches were reported to be completely alleviated since her first visit. Posture analysis revealed level occiput and iliac crests. Continued right scapula elevation, hyperextension of bilateral legs, and right foot supination continued to be observed.

Pulse point analysis of the meridian system resulted with a repeated positive Gall Bladder/liver point finding. Manual muscle testing revealed normal functioning popliteus muscles bilaterally. However, right pectoralis major sternum was found to be inhibited, which was not evident on the initial visit. Associated neurolymphatic liver points further revealed moderate pain tenderness. Alarm points were tested for inhibited right pectoralis sternum and it was observed strengthening to its own liver alarm point (liver). Treatment to tonify the liver meridian was executed with the teishin by stimulating tonification point 8.

Correction was also accomplished to T9 vertebra, associated point of the liver. The patient was instructed to continue supplements as previously recommended and was sent home.

Results

The patient returned six months later visiting from out-of-state and remarked having total relief of abdomen pain. She also claimed having normalized bowel regularity and stool form as well as being able to sleep in any position throughout the night since her second visit. Headaches were reported to be non-existent. She stated she was currently taking a "preventative" low dose vitamin A at dinner time. She commented that she avoids all soft drinks, and only goes out to eat once a month avoiding all fast-food chains.

Conclusion

Management of a case of acute abdomen pain in a 29-year-old female applying Applied Kinesiology methods is presented. It is important to note that clinical improvement was obtained by employing diagnostic and therapeutic treatment directed by AK principles. Pulse point analysis of the body's meridian system guided care sequence in directing meridian energy distributions and specific chiropractic manipulation. Utilization of cranberry and vitamin A were tested and found to be influential in supporting meridian system pathways and neurological muscle strengthening of tested muscles. After all corrections were achieved, postural deviations and muscle imbalances were observed to be normalized, as well as symptomatology of patient complaints. Causes of acute abdomen are known to be wide-ranging, however, employing Applied Kinesiology procedures allows practitioners to go beyond treating symptoms in anticipation of correcting root cause imbalances.

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Applied Kinesiology Management of Migraine with Aura

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Abstract

Objective
To explain the application of Applied Kinesiology in the management of a 22-year-old female patient experiencing chronic Severe Migraine with aura.
Clinical features
The patient presented with Chronic Migraine with aura of eleven months.
Intervention & Outcome
Examination and treatment utilizing Applied Kinesiology methods was successful with complete resolution of all patient Symptomatology.
Key Indexing Terms
Applied Kinesiology, Migraine, Aura

Introduction
Migraine with aura (also called classic migraine) is a recurring severe headache that strikes after or at the same time as sensory disturbances called aura. Most people who suffer from migraine with aura report temporary visual symptoms. Common visual complaints include flashes of light, blind spots (scotomas), zig-zag lines crossing the field of vision, flashes of light, or even loss of vision.

Other temporary disturbances associated with migraine aura may include muscle weakness, speech difficulty, dizziness, ear ringing, or numbness typically felt in a hand or one side of the face. People who are affected by migraine with aura are at a mildly increased risk of stroke.

Medical treatment is aimed at relieving migraine pain. Types of medication that is often prescribed include pain relievers, triptans, calcitonin gene-related peptide (CGRP) antagonists, anti-nausea drugs, Botox injections, blood pressure lowering medications, antidepressants, or opioid drugs. (1)

Discussion

A 22-year-old female patient presented with chronic migraine with aura of 11 months complaining of pain frequency at “almost a daily rate”. She rates the migraine pain intensity at 7-8/10 pain level, with 10 being the worst. She says about once or twice each month her migraines intensify to a 10+/10 pain level where she “doesn’t want to go on with life anymore”.

Her condition began about a year ago following a pick-up volleyball game in which the ball was spiked into the side of her right temple area as she was attempting to make a block at the net. She had

never experienced severe headaches prior, but does mention having an occasional once or twice a year mild headache from "complete lack of sleep." She had advanced imaging performed of cervical spine radiographs and MRI of the head. Both tests resulted negative. Symptomatology of her chief complaint worsens when she experiences fatigue from sleep deprivation, excessive stress, exercising too vigorously, poor eating choices, and occasionally when the weather changes drastically. She has tried over-the-counter pain and inflammation medication, anti-depressant prescription medication per her primary medical doctor, massage, and acupuncture. Anti-depressant medication was recommended because of the drastically declining emotional state she was experiencing due to her long suffering without substantial resolution. She says the only relief she obtains is by laying down in a dark room and attempting to rest for several hours after onset. Pain typically lessens between one to three hours while resting in this manner. She also takes over-the-counter Advil medication, as needed, at high doses of 600-800 mg when resting provides limited relief.

- **Health & Family History** revealed healthy eating habits of avoiding fast food restaurants, fried foods, soft drinks, alcohol, and candy. She only drinks water and occasional sweet tea. She exercises by light walking for thirty minutes, four times weekly. Her parents are in overall good health with no reported migraine history, heart problems, or other immune challenge. She is a non-smoker.
- **Physical examination** revealed the following: weight 132 lbs.; height 5'7"; blood pressure supine 110/70, standing 102/68; pulse 70; and salivary pH 7.0.
- **Postural evaluation** revealed elevated left occiput with left head rotation, elevated right shoulder, anterior head carriage, and level iliac crests.
- **Neurological testing** of the eyes in circular patterns performed both directions was conducted and found to neurologically impact a previously tested strong muscle by inhibiting it. This positive result is termed ocular lock and is a form of neurological disorganization. (4)
- **Initial muscle palpation** revealed extreme diffuse tenderness to right temporal bone, severe local tenderness to right suboccipital, moderate diffuse pain to right neck extensors, and moderate pain with correlating taut/tender muscle fibers of the upper region of the trapezius.
- **Manual muscle testing** revealed inhibited neck flexors bilaterally, inhibited right upper trapezius, right triceps, right deltoid, and right wrist flexors.
- **Joint challenge mechanisms** revealed subluxations at right occiput, Category II (right posterior ischium), T2 (left spinous rotation), and right sphenobasilar fault (forced inspiration assist).
- **Injury recall technique** (IRT) was initially performed to the right temporal bone due to history of patient's condition and trauma to the area. (4) Corrections of subluxations were then performed.

The patient returned for a following visit 10 days later and reported she had experienced her first relief of more than three consecutive days of no migraine occurrences in over a year. She conveyed she felt improved emotionally as she felt "hope" for the first time since her migraines commenced. She reported since the time of her initial visit, she experienced only three days of migraines, and were graded with substantially less intensity than before at a 3-4/10 pain level. She

also reported the duration was greatly reduced from lasting one to three hours each occurrence to currently lasting no longer than thirty minutes.

Examination using AK methods was again performed revealing the following: normalization of right deltoid muscle, right triceps, right wrist flexors, and bilateral neck flexors; occiput leveled out; subluxations of T2 and right category II posterior ischium remained. Ocular lock also was visualized and remained positive. Further, right trapezius continued to show muscle weakness upon manual testing and right sphenobasilar fault was again present. Ragland's blood pressure test improved 112/72 sitting to 112/74 standing.

Upon re-examination, right temporal bulge was found along with left parietal fault, sacral inspiration fault, and cruciate suture jamming. (4) A ligament stretch test was then performed assessing ligament integrity for potential need of nutritional support assisting joint strengthening. (4) Numerous areas were utilized for evaluation including bilateral wrist and ankle joints. The test displayed that a prior normal functioning indicator muscle became inhibited on each instance any wrist or ankle joint was tested. It was determined that oral insalivation of the mineral manganese negated the ligament stretch test and improved range of motion of the hamstring visualized from a standing stretch position. (2) Correction of subluxations were accomplished and the patient was sent home.

The patient returned in 2 weeks, and reported zero migraines during the entire duration since her previous visit. She stated she feels "happy and ready for life again." She also noted sleeping throughout the night had greatly improved and her ability for breath inhalations seemed easier, which she had not noticed until recently. Reexamination revealed negative cranial and sacral faults, negative ocular lock, normalized deltoid muscle, and negative pain upon deep palpation for all muscle areas involved. Challenge mechanism revealed T4 (anterior) and T10 (left spinous rotation) subluxations. These areas were then corrected. The patient was recommended to return in 1 month and continue supplementing manganese at one tablet two times daily for 10 additional weeks. After which, she was advised to consume a whole-food grade multi-mineral containing manganese daily.

Results

The patient returned five months later due to an injury of low back from rigorous exercising. She was questioned about her prior migraines and replied not having experienced one migraine episode or even having one mild headache since her last visit.

Conclusion

Management of a case of migraine with aura in a 22-year-old female utilizing Applied Kinesiology methods is presented. It should be noted that correction was obtained by utilizing an injury recall technique involving assisting the brain in communicating with injured parts of the body, correction of cranial faults to restore proper movement and nerve function, and utilization of manganese minerals aiding in supporting joint alignment for chiropractic manipulation and strengthening joint integrity. (4) After corrections were accomplished, all postural deviations and muscle imbalances were quickly normalized as well as chief complaint symptoms by the patient. Cause of migraines are known to be

varied, however, utilizing Applied Kinesiology permits practitioners to go beyond treating symptoms only in hopes of correcting root cause imbalances.

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Applied Kinesiology Diagnosis and Treatment Routines in The Athlete Patient: A PAK Perspective

Barton A. Stark, D.C., DIBAK, DIAMA

Abstract

The author discusses an AK viewpoint for injury prevention, treatment, and human performance in the athletic patient. A review of Professional Applied Kinesiology (PAK) aspects of diagnosis and treatment is presented and expanded based on the author's clinical experience. Correlations to typical Professional Applied Kinesiology (PAK) findings and structural factors are clarified. Specific PAK diagnostic and treatment protocols are recommended.

Key Indexing Terms

Professional Applied Kinesiology, Sports Medicine, Athlete, Sports Injuries, Dr. Goodheart, Dural Torque, Sensory, Motor Function, Stomatognathic System, Gait, Muscle Testing

Introduction

Athletes, from junior high to professional levels, are vulnerable to abnormal stress from trauma, overtraining, genetic factors, and much more. The well trained and thorough AK practitioner is uniquely positioned to intercept and treat these clinical phenomena at every stage of an athletic career.

In the authors experience using PAK methods over several decades, an athlete evaluation that prioritizes core body function will yield optimum outcomes. Thorough treatment of any area of complaint, whether in the core or extremities, will be more successful when the core structures are addressed. The **feet**, **dura mater**, and **breathing/ribcage** function are often the most important underlying structural factors effecting core and extremity health and performance in athletes.

The ingenious work of Dr. Goodheart and other dedicated AK innovators is a powerful toolset that is entirely unique to AK. Thus, the AK practitioner is an irreplaceable resource in the career of any athlete.

Discussion

Abnormal biomechanics in the stomatognathic system and/or extremities is a constant finding in most athletes. This creates a disturbed sensory barrage to brain resulting in a motor pattern that is suboptimal in quality and specification. The athlete is then

predisposed to repetitive stress and/or traumatic injury. AK treatments are irreplaceable in reducing nervous system static that corrupts the sensory quality from extremities and core structures. For example, **Dural Torque** corrections are a regular and primary opportunity to help prevent stress, strain, injury, and improve human performance. When these factors are addressed, the AK patient can focus their volitional intent for efficient motor function, personal achievement, and sustained training and improvement.

For examination purposes the author divides Manual Muscle Testing (MMT) into **Core** and **Extremity** muscles. Core muscles and the stomatognathic system should always be examined no matter the patient's presenting complaint. This is a delineation between the symptom-oriented vision of other disciplines and PAK. The PAK doctor must keep in mind the "global" picture while addressing the local or regional complaints.

The normal motion of the **stomatognathic structures** (pelvis, spine, TMJ, and cranium) and **dura mater** is of primary structural importance in core function, health, and athletic performance. Too often these pivotal components of healthy body movement are ignored and unaccounted in other physical medicine disciplines.

Core Examination

- Gait movement
- Bony landmarks – anterior/posterior views
    - relative levels of ASIS, PSIS, Sacral base and apex, shoulders, occiput; lateralization of coccyx, spinal curves
    - in lateral views note relative positions of ear, gleno-humeral joint, hip joint, pelvic tilt and anterior to posterior or lateral sway
- Stomatognathic System contributions to Dural Torque and tension (1, 2, 3, 7)
    - Pelvic Categories (PAK or SOT protocols)
        - Cat I, II, III
    - Ilio-lumbar ligament
    - Spinal subluxation and fixations (TS line, Upper Trapezius line), disc syndromes
    - Ribcage subluxation/fixation, Breathing
        - Esp. inferior right upper ribcage and left ribcage extension misalignment (3)
    - Cranial Faults
    - Dural traction adjustment (3)
    - Temporo-mandibular Joints
- MMT (1, 2)
    - Psoas, Quadratus lumborum, Multifidus, Iliocostalis, Gluteus maximus, Piriformis, Trapezius – upper/middle/lower, Rhomboids, levator scapularis, Suboccipitals, Abdominals, Diaphragm, SCM, scalenes, deep neck flexors, Neck extensors
- Brain-based Neurological tests - help indicate cerebellar and cerebral effects on core muscle tone (3, 8)
    - Romberg and sharpened Romberg - ipsi Postero-lateral sensory columns and cerebellum indicator

- Visual Convergence test – medial rectus weakness indicates relative weakness of opposite cerebral cortex
- Uvula/soft palate - lower on side of weaker cerebral cortex

Regional / Extremity Exam

- MMT – test all local AK and Beardall muscle tests (1,2)
- Pincer palpation for entire length of fascial trains which cross problematic area (1, 4, 5)
    - Ex: for pelvic bowl muscle inhibition also use pincer palpation along entirety of the Front Functional Line of fascia for additional treatment areas
- Directional challenges for local skin (1)
- Ligament Interlink (1,2)
- Ligament Receptor/Stretch technique (1)
    - Type 1 treat with B&E point
    - Type 2 can indicate need for Choline
    - Type 3 can indicate Vit B9 or GABA
- Local spinal and/or peripheral nerve entrapment related muscles (1)
- Palpate muscles and fascia for tension and trigger points
- ROM, pain, position of injury (BID, EID), scars in area (1, 2)

Empirical AK Examination testing

- Diaphragm (8)
- Aerobic / Anaerobic testing (6, 9)
- Nasal Ionization (1, 2)
- Retro / Anterograde Lymphatic challenges (1, 2)
- Primary Atlas (1, 2)
- Rib Pump / ribcage function (1, 2, 3)
- Pelvic Floor (shortcut: myofascial release of Adductors and Front Functional Line of fascia) (1, 2, 3, 4)
- Functional Hallicus Limitus (1, 2)
- Gait muscle testing (1, 2)
    - Ex: Psoas Major and Pec Major muscle simultaneous inhibition: treat K1 and pincer palpate for additional treatment areas along the Front and Spiral Lines of fascia
- Psychological Reversal (1,2,3)
    - Have athlete write challenge sentences to help engage cerebral motor cortices
- Beginning and Ending technique, (1,2)
    - B & E acupoints on the face can be used anytime they give a strengthening response
- PRYT: helps reveal areas contributing to Dural Torque and Stomatognathic dysfunction (1, 2)

Conclusion

We have seen core and extremity muscle function, Stomatognathic system, and other biomechanical factors effect power, accuracy, timing, speed, comfort, injury, prevention, and general human performance in athletes from little league to professional levels of sport.

Thus, in addition to thorough AK muscle examination and treatment, we suggest testing and treating for the numerous related or stand-alone functional tests and novel treatments that Dr. Goodheart and others developed, as part of our simultaneous global and local mindset when addressing patient complaints. In fact, this clinical frame of mind is an essential part of the DNA of any skilled PAK practitioner.

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Autism: Treatment Using Diagnostic Manual Muscle Testing & Professional Applied Kinesiology

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Abstract

The purpose of this paper is to share a method of treating a patient diagnosed with severe autistic disorder. Diagnostic manual muscle test (DMMT), primitive reflexes, receptors-based therapy, meridian therapy, Profession Applied Kinesiology (PAK), chiropractic, and other conservative natural methods were utilized to greatly improve this patient's quality of life and overall well-being in a matter of weeks. Improvements in sleep, motor control, communication, and overall body tone were noted. These changes were accomplished in less than five treatment sessions, spaced one to two weeks apart, and spanning a six-week period.

Key Indexing Terms

Autistic Disorder, Kinesiology Applied, Receptor, Meridians, Neurologic Examination, Reflex, Reflex Startle, Reflex Babinski, Reflex Abnormal, Neurology, Reflex Pupillary, Complimentary Therapies, Chiropractic

Introduction

Dr. Michael Allen asserts in the Medical Hypotheses Journal that "with few exceptions, all activities of the CNS, receiving, processing, and integrating information, ultimately finds its expression in the physiological or pathological condition of a muscle. All that converges on the ventral horn physiologically or pathologically affects the manual muscle test (MMT). The cortical efferent display is a window into the functional output of the entire central nervous system. Therefore, the muscle is the end organ relative to the musculoskeletal aspect of the entirety of the sensory system, while the target organ or gland is the end organ of the somatic and/or the autonomic display."

Dr. Noah Moos shared in Virtual Roundtable- Episode 15; 2021 his method using DMMT to evaluate primitive reflexes. He further expanded on using meridian therapy "alarm points" to locate the dysfunctional muscle/organ relationship/s correlating to specific abberant primitive reflexes.

Allen discussed the primitive reflexes in his 2021-2022 ICAK-USA Proceedings, "Evaluating vestibulospinal integrity via three Galant reflex responses using Manual Muscle Testing as functional neurology." He noted that "It has been reported by various authors that the primitive reflexes should only have a limited lifespan. Goddard continues by saying, "If these primitive reflexes remain active beyond 6-12 months of life, they are said to be aberrant, and they are evidence of a structural weakness or immaturity within the central nervous system (CNS).

…Primitive reflexes retained beyond six months of age may result in immature patterns of behavior or may cause immature systems to remain prevalent, despite the acquisition of later skills."1 That primitive reflex known as the Galant reflex is observed relative to certain phenomenon that encourages movement and develops hip range of motion in preparation for walking and crawling. Some teachers observe children in their classes who cannot sit still. They say that these children seem to be unable to stay in one place for even the shortest of periods. Besides other signs and symptoms, these kids often have trouble with clothing, like pants or dresses that are too tight around their waist; they cannot stand being restricted around their middle." Allen more specifically expands on the Galant primitive reflexes by saying, "the neuro-typical Galant reflex should not be extinguished and it should be retained with its functional attributes, mingling with the neurological matrix that enables the host to resist gravity – i.e., to stand upright. An aberrant Galant reflex permits an abnormal posture, i.e., the inability to stand up straight and it may contribute to scoliosis. 2 One of the main ideas of all the following is that the posture must be appropriate for the host's neuraxis to function according to its highest potential."

The purpose of this case report is to expand upon the primitive reflex evaluation described by Moos and its value in improving quality of life for autistic disorder when properly evaluated with DMMT. This report will also give real-world application to the assertion by Allen and receptor-based modality as he clearly summarizes; "Takeaway #1: Gravity is the stimulus, but receptors are the modality. ----Takeaway #2: Changing receptor input will change motor response. An example is the delivery of a coupled manual manipulative adjustment of the periphery and/or centerline structures that causes central changes with concomitant modification of the ventral horn and α-motoneuron display. ----Takeaway #3: Modifying receptor input through spinal manipulation, rehabilitative exercise, etc., will change muscle function. The nervous system is dynamic, even responding pathologically to dysplastic/dysrecipric change. ----Takeaway #4: Our perspective offers an alternative to the long-held theory that the α-motoneuron is the cause of the receptor input (motor response). It is our intent to convey the truism that the central nervous system is receptor dependent, and that primary afferentation begins in the periphery with the character of its ultimate display being exposed in the end organ. This is a novel presentation relative to the generally accepted attitude that chiropractic lacks credibility."

Methods

1. Nine-year-old (yo) female presents with severe autistic disorder.
2. Poor sleep, with difficulty going to sleep, and staying asleep.
    - Failure to gain weight.
    - Poor coordination, frequently bumps into walls and other objects.
    - Outbursts and poor verbalization.
3. History- she had been seeing a physical therapist (PT) and a speech therapist (ST) weekly for the past three years.
4. We were able to perform a single arm DMMT. Other muscle evaluations proved too difficult to communicate, hence perform. She was instructed to hold her arm straight as if pointing her hand towards the ceiling while supine on the table. Fortunately, this allowed for a DMMT of the anterior shoulder muscles and a way into evaluating her nervous system.

5. Stimulation of a single dysfunctional primitive reflex which inhibited her anterior shoulder muscles indicated that this reflex was aberrant.
6. Each aberrant primitive reflex was then evaluated to see which alarm point or points facilitate the inhibited DMMT indicating the related meridian/s and organ involvement. This is accomplished via therapy localization (TL). TL is activating receptors to a specific region of the nervous system by touching, tapping, pressure, rubbing, pinching, near vision, or far vision etc., which may affect the DMMT. TL allows information to be gathered and layered together toward methods for corrective modality. For example: Activating a dysfunctional rooting primitive reflex on the right cheek inhibits the DMMT, and touching over the heart alarm point facilitates the inhibited DMMT. We may also activate the rooting reflex on the right cheek to inhibit the DMMT then find that near vision facilitates the test as well, and may find that TL to a specific vertebral segment, reflex, or joint may also change the DMMT. Each one of these receptor-based pieces of information is valuable in treating/correcting this primitive reflex. It should be noted; inhibition is not always an unfavorable response, instead changes within the muscle test can help us "layer" information together as the nervous system responds to the stimuli.
7. Each meridian/organ is typically expressed through a specific related muscle inhibition, which we were unable to use and test in a typical fashion on this patient. (For example, the heart meridian's related muscle relationship is the subscapularis. Typically, if the heart alarm point was indicated in 6) then we could change our DMMT to the subscapularis of the involved side for evaluation) In this case, we were limited to using the anterior shoulder muscle test alone.
8. After the involved meridian/organ/muscle is identified relative to the aberrant primitive reflex, then TL can be utilized to find the nervous system's next priority for correction.
9. Appropriate treatment was applied to the nervous system along the way, where TL negated each dysfunctional primitive reflex.
10. In traditional Chinese medicine (TCM) there is a concept which is described as a state of "Yin", which means the nervous system is relaxed. This concept is utilized through DMMT when a dysfunctional primitive reflex has been corrected. The nervous system will reach a state of "Yin" which manifests as inhibited bilateral DMMT of multiple muscles for a short amount of time. For example: Activating a right aberrant Babinski reflex inhibits a DMMT, and TL over the right liver alarm point facilitates the inhibited DMMT. TL to the right liver alarm point would be used while "layering" more information into the DMMT such as related vertebral segments, joints, stressors, muscles, cranial nerves, etc. It should be noted; the inhibited or facilitated DMMT does not matter once the associated alarm point is uncovered. We make proper corrections until the nervous system reaches "Yin" for that dysfunctional pattern.
11. Each primitive reflex was evaluated and corrected as indicated utilizing PAK, chiropractic, and complementary and alternative therapies with improvements to the patient's overall quality of life, sleep, motor control, muscle tone, and speech.

Discussion

Upon presentation, the nine yo girl, was described by her parents as suffering from frequent collisions with objects, floppy body movements, difficulty gaining weight, outbursts, and disrupted sleep patterns sensitive to routine changes.

Initial examination and treatment were challenging due to the patient's restlessness and limited communication abilities. However, the use of DMMT enabled the evaluation of primitive reflexes and nervous system function. She was able to perform the task of holding her right or left arm up in the air (pointing towards the ceiling), while lying supine on the examination table.

The first visit was the most difficult and shortest of the five treatment sessions. Her right rooting primitive reflex inhibited the DMMT which was found to be related to the left lung (meridian) alarm point via TL. Next, the left lung alarm point was either tapped to TL or she was instructed to touch the alarm point herself for TL depending on level of compliance. Next, corrective modality was applied to bilateral 1st metacarpals, bilateral diaphragm manipulation, right occiput, and right C1 before the "Yin" pattern emerged. The right rooting reflex was then re-evaluated using DMMT which was now found to be of neuro-typical function.

Second visit, she was said to be sleeping better as well as not bumping into walls over the past week. An aberrant Moro primitive reflex was found related to stomach alarm point, and an aberrant right upper Galant primitive reflex was found related to stomach alarm point as well. Corrective modality was applied as previously described. Corrections were given to bilateral talocrural, left 1st metacarpal, right 1st metacarpal three times, right ear, left C2, left T8, and one emotional incongruency. Re-evaluation indicated a neuro-typical response to Moro; however, the right Galant reflex was still aberrant and needed more evaluation on the following visit.

Third visit, she was described to be more in control of her body, "less floppy". Both the speech therapist and physical therapist noted a drastic improvement in her abilities that week. An aberrant right upper Galant primitive reflex was found related to pericardium alarm point, and a aberrant right palmar grasp primitive reflex was found related to heart alarm point. Corrective modality was applied to bilateral diaphragm, bilateral 1st metacarpals, bilateral talocrural, right occiput, right C1, left anterior ilium, left calcaneus, right scaphoid, and left scalene muscles.

Fourth visit, she met her three yearlong physical therapy goal of standing/balancing on one leg that week. An aberrant right asymmetric tonic neck primitive reflex was found related to bladder alarm point. Corrective modality was applied to bilateral 1st metacarpals, right occiput, left occiput, right C1, bilateral talocrural, left diaphragm, south pole magnet left knee, right upper trapezius muscle, and right posterior ilium.

Fifth visit, all primitive reflexes were neuro-typical in nature. Evaluation included; palmar grasp, rooting, Moro, Galant, asymmetric tonic neck, Babinski, suckling, tonic labyrinthine, as well as pupillary light/dark reflexes. A general well-being treatment was applied on this visit. Corrective modality was applied to bilateral diaphragm, bilateral upper trapezius muscles, bilateral talocrural, right occiput two times, left C1, right anterior ilium, bilateral sacrotuberous ligaments,

and bilateral scalene muscles. At the conclusion of this visit, her verbal communication was noted to be clearer.

Results

The treatment of a nine-year-old female with a severe autistic disorder using Diagnostic Manual Muscle Testing (DMMT) and Professional Applied Kinesiology (PAK) showcased remarkable improvements in her quality of life and overall well-being. The patient's ability to sleep, control motor functions, communicate, and overall muscle tone were notably enhanced within a span of five treatment sessions over six weeks.

Each session involved the evaluation and correction of aberrant primitive reflexes, alongside a holistic approach integrating chiropractic and complementary therapies. At the outset, the patient presented with significant challenges, including poor sleep patterns, difficulty in gaining weight, coordination issues, frequent collisions with objects, and verbalization difficulties. Initial assessments were hindered by the patient's restlessness and limited communication abilities. However, through the strategic use of DMMT, we were able to evaluate her primitive reflexes and the functionality of her nervous system effectively.

The first treatment session addressed the right rooting reflex, which inhibited DMMT and was related to the left lung meridian alarm point. Through TL, corrective modalities, and receptor-based therapy, the rooting reflex was brought to a neuro-typical function. Subsequent sessions saw a progressive improvement in the patient's condition. By the second visit, there was a noticeable enhancement in sleep quality and a reduction in collisions with objects. Aberrant Moro and Galant reflexes were identified and corrected, leading to significant improvements in motor control and coordination. The third and fourth sessions focused on additional primitive reflexes, including the right upper Galant and asymmetric tonic neck reflexes, related to various meridian alarm points. Corrective modalities applied during these sessions further improved the patient's control over her body movements, to the point where she achieved her three-year-long physical therapy goal of balancing on one leg. By the fifth visit, all evaluated primitive reflexes were found to be neuro-typical, marking a significant milestone in the patient's treatment. The session concluded with general well-being treatment, after which her verbal communication was observed to be clearer. In conclusion, the case demonstrated the efficacy of DMMT and PAK in treating a patient presenting with severe autistic disorder, highlighting the potential of these methods in improving the quality of life for individuals with autism spectrum disorders. The remarkable progress made by the patient underscores the value of a holistic treatment approach, encouraging further research and application of these techniques in healthcare.

Conclusion

The case study presented in this paper demonstrates the successful use of Diagnostic Manual Muscle Testing (DMMT) and Professional Applied Kinesiology (PAK) in the treatment of a nine yo female with severe autistic disorder. Through the evaluation and correction of aberrant primitive reflexes using a combination of chiropractic and complementary therapies, significant improvements were observed in the patient's quality of life, sleep patterns, motor control, and speech abilities in a relatively short period of time. This case highlights the importance of

treating the whole person rather than focusing solely on the diagnosed condition, and emphasizes the potential benefits of a holistic approach to healthcare. Further research and exploration of these methods may provide valuable insights into alternative treatments for individuals with autism spectrum disorders.

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Contemporary Management of the Estrous Cycle

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Abstract

Mankind's impact in this current epoch, "the Anthropocene" is immense. The Juggernaut of his creations of industrial technologies and their impact on life on this planet have now created a sub-epoch - "the Plasticene" This sub-epoch makes more apparent that fact that women are not men, yet in many health care systems they are treated exactly the same. It is time and more important than ever for contemporary healthcare practice to catch-up and be contemporary when it comes to dated systems, views and philosophies applied to women's healthcare. In this work we explore one connection between the estrous cycle and the overall female's physiology. We also review extant tools that show how a clinician can observe this system and work it to his advantage and help build health and optimize function using standard Applied Kinesiology methods.

Key Indexing Terms

Estrogen dominance, Chiropractic, Applied Kinesiology, Ileocecal valve, Cranial Fault, Subluxation, Manual Muscle Test (MMT), Myofascial System, Functional Medicine, Enterohepatic Recirculation. Plasticene epoch.

Introduction

The treatment of women in modern healthcare more than ever needs to be customized to the females' unique physiology. She has several hormonal patterns that differ from a man's and the impact of seemingly unrelated organ and gut function as well as the effects of endogenous and xenohormones in her system has been under-appreciated or even ignored in the main. One such pattern is that of Estrogen dominance and its resultant negative functional and even mystery illnesses created in many women and men. There are many patterns that could be discussed but, in this work, we will focus on women and rekindle an old trusted technique. We will look at contemporary thought and testing processes that can be used to intentionally identify and manage the presence of too much estrogen and stimulate elimination thereof.

Jargon relating to Estrous Cycle

Estrous is the process of relating to or involving the period of maximum sexual receptivity of a female mammal. This process is run by the fluctuation of hormones estrogen and progesterone with estrogen dominating. Estrogen is a cache all term for 3 forms of estrogen presents in female. These are estrone (E1), estradiol (E2) and estriole (E3). E1, Estrone is postmenopausal estrogen and is produced in the adrenal cortex, E2 is estrogen that is produced during a woman's' reproductive years, E3, is made de novo, given pregnancy and so is the estrogen of pregnancy.

Plasticene Epoch – This is the current time of our current society when plastic is found in the ground, inside living things and even in rocks. It is a sub-epoch within the current Anthropocene epoch – a time when humans had a profound impact on the Earth. (Rangel)

Enterohepatic recirculation is the inborn process and ability of the body to recirculate varying moieties of hormones, vitamins, minerals, toxins and other biochemicals to the benefit or detriment of the organism and it's governed by a variety of factors.
"First pass effect" – a term used to denote the liver's role in detoxifying all items that enter through normal digestive processes. The liver is the first organ after the stomach to detox or be impacted by the item ingested.

Background and Preparation The estrous cycle
The average female estrous cycle considered over a given month is estrogen dominant for the first 15 days with a testosterone surge on or around day 15 due to ovulation. After that time a progesterone surge occurs while estrogen levels lower slightly but stay high enough to maintain the recently grown endometrial lining. There are also other hormones involved and impacted substantially by these hormonal levels which include hormones of the thyroid, pituitary, cytokines, myokines and adrenal related hormones. Therefore, it is easy to see that hormones related to menstruation can have a vast impact on female physiology if present in too great a quantity, or too little a quantity, or if their ratios are off per what has been observed during normal function and timing (Walther)(Schmidtt) (Goodheart).

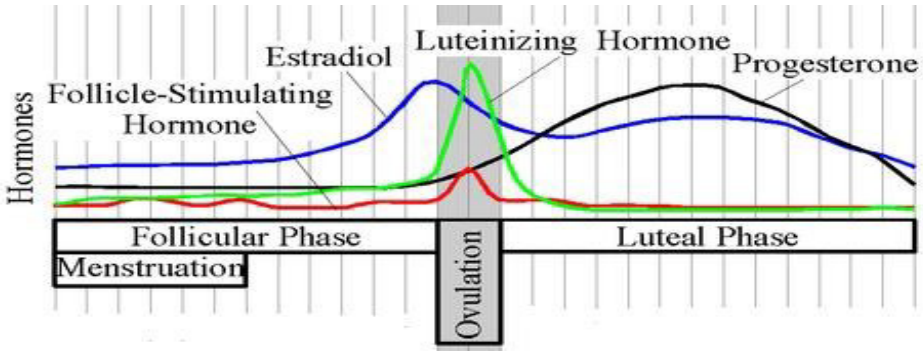
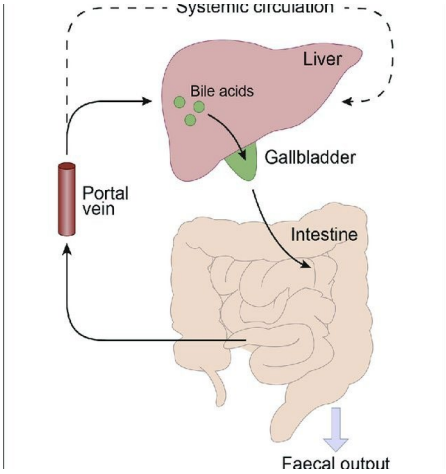


Figure 1: Bile Acid Signaling Pathways from the Enterohepatic Circulation to the Central Nervous System (Mertens)

Enterohepatic recirculation



The liver and intestinal tract work together to keep the ecosystem in the body working for the hormonal benefit of the entire organism. The intestinal tract has the function of absorption, elimination and recirculation of certain items. The flora that are resident also play a role in the creation of hormones and vitamins that the organism needs to grow. If a hormone or biochemical is recirculated when it should be eliminated or visa- versa it may be potentiated or now deficient and its impact on the body can be a side effect or symptom. (Gun) (Mertens)

Xenoestrogens
Those under 70 years of age have lived in a new sub-epoch. the new sub-epoch has been dubbed “the Plasticene” due to the omnipresence of plastic in our environment and bodies. A recent article documents an estimated 170 trillion plastic particles in the ocean and these are estrogenic. There are roughly 21,000 microplastic particles per person on planet Earth. That means that every man, woman and child on this planet now has a plastic burden. The plastics which most often come from single use containers end up in the ocean and then in our bodies. They are estrogenic, which means they must be eliminated by the liver if possible and can be subject to recirculation- that is enterohepatic recirculation in the body byway of the liver and large intestine. (Rangel) (Yang)

The planet currently is drowning in plastic. This is quite relevant to digestion and intestinal health as the digestive system has to handle this unnatural burden. The liver and large intestine may be particularly vulnerable due the “first pass” like effect related the consumption and exposure to drugs and pharmaceuticals and now micro-plastic.

Large intestine valves, two named valves in the large intestine are the Ileocecal Valve and Valve of Houston. Schmidt has told us that these valves can be a source of referred pain and that women who suffer from difficult and painful periods often have problems in this area. (Schmidt) (Goodheart). Dr. Goodheart also in his Chiropractic Economics article about the ileocecal valve states, “This syndrome is involved in so many conditions in so many ways it should always be considered as a possible etiological factor in any condition. “If makes sense then that the symptoms are not always caused by the valve but instead by the estrogen from plastic that has been recycled and may be cause of aberrant valve function. Henry Gray indicated the structure of the ileocecal valve has microvilli like the rest of the small intestine. The function of microvilli is the absorption of nutrients and millimeter sized microplastics may occlude or effect this area.

Discussion

In this age of plastic exposure, a clinician who treats women is reminded that the symptoms of estrogen dominance may be more violent and pronounced than ever and the source of those estrogens may seem illusive at first but when one looks, they are almost ubiquitous. The ultimate question is, besides waiting for political figures to take action and ban plastic altogether because of its negative effects on the Planet, what can we do about our existing exposure and what should we consider when managing patients?

We know many things. We know that the incidence of colorectal cancer for those under the age of 70 has been increasing steadily over the years and that this a major factor in the cause of colorrectal cancer and a complicated issue. One positively related major change is the increasing omnipresence of plastics and the estrogen influences on our bodies, flora and cells of the large bowel. (Li) While all life on the planet is sensitive to this issue, this work focuses on the impact this has on females and the need and gift of using Applied Kinesiology to help restore normal function.

When a female patient presents with complaints that show excessive estrogen receptor stimulation, we owe it to her to check and locate the cause of receptor over stimulation.

A list of symptoms appears below:

- Decreased sex drive
- Increased PMS symptoms
- Irregular periods
- Mood changes
- Difficulty concentrating
- Bloating
- Hot flashes
- Breast tenderness
- Weight gain
- Insomnia

Often it is not the endogenous estrogens that are cause the but poor intestinal function due to a buildup of xenoestrogens leading to dysfunction of the valves and poor function of this system as well as other systems in the human body. (Goodheart)

This can be corrected by testing for estrogen dominance removing offending items from the life style – typically all items made from plastic - as possible restoring valve function though standard AK procedures. Education on sources of plastic and environmental issues

Conclusion

It is hard to believe the simplicity in the correction of such issues. It also hard to believe that such a small thing could bring on such pain, dysfunction and disability in people. It is amazing to see the relief that competently administered AK protocols provide. Sadly, as our environment becomes more and more impacted by the juggernaut industry and plastic it produces, we see myriad dysfunctions continue to elevate and the mismanagement of these escalate to the detriment of the patients and mankind. The correct actions are the basic correction of the large intestine valve and internal environment. And voting with your wallet and ballot and actions and avoiding the use and purchase of plastics. This is bigger than just one patient, The planet and mankind are being feminized, overwhelmed and slowly destroyed. Many just watches entertained as spectators in their own demise.

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Idiopathic Referred Tooth Pain Due to Orbicularis Oris Trigger Point Activity

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Abstract

In treating idiopathic tooth pain that does not respond to the usual approaches of Applied Kinesiology, the presence of orbicularis oris trigger point activity should be considered.

Key Indexing Terms
Idiopathic, Tooth Pain, Trigger Point, Muscle Spindle, Orbicularis Oris

Introduction

While tooth pain is not a frequent initial complaint in a chiropractic Applied Kinesiology (AK) practice, as patients gain experience with the positive results that are typically achieved for the presenting problems, they are more likely to mention other symptoms, sometimes in an off-hand way. One of these is tooth pain, which most patients only consider in the purview of dentists. Thanks to the Neurologic Tooth (NT) procedure, many good results have been achieved in relieving tooth pain, and not uncommonly preventing the need for more invasive dental procedures. In cases where results are not achieved and dental problems are not the obvious cause of the tooth pain, the following procedure may be of benefit.

Discussion

An established and long-term patient asked me, “Can you do anything about tooth pain?” The patient was undergoing orthodontic work using clear plastic aligners. Orthodontia commonly causes specific tooth pain whenever there are adjustments to the aligners, whether traditional braces or the clear aligners. In this case, the pain the patient was experiencing was atypical of the usual pain of aligner adjustments, and since the patient had finished the treatment and was wearing retainers only at night, the aligners themselves were unlikely to be causative. The pain was described to be moderate to severe, brief and lancinating with varying frequency and typically with mouth movement. In this case, there were three teeth involved; the right upper 2nd incisor, the canine, and the first premolar. The usual tests to determine the presence of NT involvement were negative and there were no indications of temporomandibular joint or muscles of mastication involvement.

It occurred to me that since the pain was so atypical and involved multiple teeth, that it may be trigger point related. On having the patient therapy localize (TL) over the upper right orbicularis oris muscle, there was a positive response. Tapping over the area also elicited a positive response when testing an indicator muscle. I also found that the trigger point could be challenged by having the patient puff the lips, resulting in a change in the indicator muscle. I then applied *gentle* muscle spindle correction in the area that was positive using approximating direction of pressure with the result of complete elimination of the pain which was lasting in effect.

Since that original observation, I have found this technique to be useful on many patients with otherwise unexplained tooth pain.

One patient in particular is worth mentioning. She had been a patient for decades and through the years, I had found and corrected NT problems, multiple cranial faults, and many other possibly related problems, but was never successful in helping her with the recurring and often constant tooth pain, involving multiple teeth and often migrating from right to left or involving the maxillae in general. Unfortunately, this patient had undergone many invasive dental procedures over the years for this tooth pain with equally unsatisfying results. I tested her using TL over the orbicularis oris and also tapping and found positive reactions. I made the appropriate correction using gentle muscle spindle technique with approximating pressure. To my delight, and especially the patient's, this chronic idiopathic pain was eliminated.

Conclusion

Referred pain is a well-established phenomenon related to trigger point activity. This finding adds just one more tool to the toolkit for dealing with tooth pain. While, to date, in my experience, the muscle spindle technique has been successful in dealing with orbicularis oris trigger points, other techniques for dealing with trigger points, such as percussion and fascial release should be considered when indicated.

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Serratus Posterior: Incorporating the Superior and Inferior Division into Professional Applied Kinesiology

Zeya H. Alikhan, D.C., DIBAK

Abstract

Serratus posterior superior and serratus posterior inferior muscles are discussed and treated by many manual therapists in the health care field. Yet in Professional Applied Kinesiology official literature there is no mention of this muscle. In the medical literature, the Serratus posterior muscle has traditionally been viewed as an accessory muscle of respiration.

This paper proposes that the serratus posterior superior muscle be viewed more as an anchoring muscle stabilizing the cervico-thoracic junction and the serratus posterior inferior muscle stabilizing the thoraco-lumbar junction. An inhibition of these muscles will cause compensatory response in other areas of the body thus leading to body distortion and pain.

A muscle test for the serratus posterior superior and serratus posterior inferior is proposed along with its anatomy and clinical relevance.

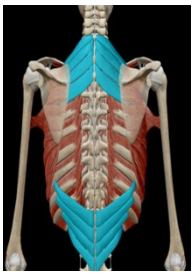
Many of the compensatory inhibited muscles that are found in our initial structural exam can be reduced by evaluating and correcting these two divisions of the serratus posterior. This in turn allow the practitioner to better able address the more underlying root cause of a patient's structural condition.

Key Indexing Terms

Professional Applied Kinesiology, Serratus posterior superior muscle, Serratus posterior inferior muscle, Serratus Posterior muscle, Muscle Testing, Muscle balancing

Introduction

Serratus posterior superior (SPS) and serratus posterior inferior (SPI) are thin back muscles which lie above the intrinsic back musculature and are deep to the trapezius, rhomboids, and other spinal extensor muscles.



An internet search on the SPS and SPI shows a vast array of websites which describe the anatomy, function, clinical relevance, exercise, rehabilitation done by a wide variety of practitioners ranging from medical doctors, chiropractors, osteopaths, physical therapists, massage therapists, sports trainers, and body workers etc.

Yet in the three major reference manuals of Professional Applied Kinesiology (PAK), such as Walther's Synopsis (1), Leaf's Flowchart Manual (2) and Garten's Muscle Test Handbook (3), there is no mention of the serratus posterior muscle.

In Dr. Janet Travell's trigger point book, there is a full chapter dedicated to the serratus posterior superior and inferior muscle (4).

Kendall et.al mentions the SPS and SPI muscles as two of the five respiratory accessory muscles that "cannot be tested manually and are inaccessible to palpation". The other three muscles are levatores costarum, transversus thoracic and the subclavius (5).

It is interesting to note with regards to the subclavius, which Kendall had mentioned that "cannot be tested manually", that a muscle test was found by Dr. Beardall and is presented in Dr. David Leaf's flowchart manual (6) and Dr Garten's Muscle Test Handbook (7).

It is the authors intention to introduce the serratus posterior muscle into PAK. And also, present its anatomy, clinical relevance, to show the importance of this muscle and when inhibited how it can create many compensatory muscle responses within the body that the patient will present as their pain. After years of refinement, a muscle test is proposed for the SPS and SPI.

Discussion

Traditionally, in medicine the serratus posterior muscles are looked upon as being accessory muscles of respiration where the SPS elevates the ribs on inspiration and the SPI depresses the ribs on expiration (8).

However, in the following study there was no evidence of the serratus posterior muscle having a respiratory role. Cadaver dissections of the SPI and SPS muscles from COPD patients were performed and it was found that "no morphometric differences exist between that of serratus posterior superior and inferior muscles of COPD patients versus controls" (9).

Another study showed that these muscles may not be an accessory muscle of respiration but may be proprioceptive in nature. With the SPS monitoring the head and the SPI monitoring the spine which then communicates with the surrounding muscles on how to best maintain the body in a proper functioning manner. The study proposes that the SPS have myofascial pain syndrome implications and "may have greater clinical relevance than commonly attributed to them" (10).

It is this authors opinion that the serratus posterior be viewed as a strong extensor stabilizer where the superior division anchors the cervico-thoracic junction, and the inferior division anchors the thoraco-lumbar junction, which are the transitional segments of the spine. This is akin to a door hinge, which anchors the door to the door frame. If the hinge is loose, then the door is more unstable and prone to breaking off the door frame when pressure and stress is applied to the door.

It has been well established in PAK than an inhibition of the extensor muscles will cause a forward translation of the body with subsequent hypertonicity of the flexor muscles such as the anterior neck flexor, pectoralis, and psoas muscles. This type of a scenario can create and/or aggravate a myriad of impingement syndromes in the cervical spine, cranium, shoulder, low back, pelvis, upper and lower extremity along with affecting the function of the ribs.

By finding and correcting the inhibition of the SPS and SPI muscles, it can support the extensor portion of the body to be more stable and thus eliminate or drastically reduce many of the compensatory hypertonic muscles that are found in our initial structural exam findings. With this additional tool in our "toolbox", we can rediscover the use of the SPS and SPI muscles.

<u>Serratus Posterior Superior (General information):</u>

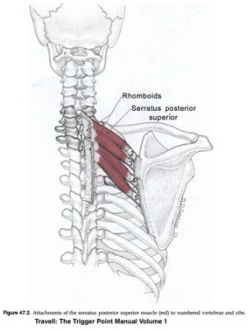


Figure 47.2. Attachments of the serratus posterior superior muscle (red) to numbered vertebrae and ribs.
Travell: The Trigger Point Manual Volume 1

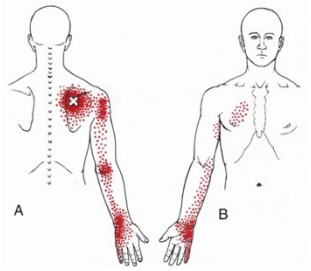
<u>Origin:</u> Arises from the aponeurosis at the inferior end of the nuchal ligament at the spinous process of C6-T2, adjacent to the supraspinous ligament (4).

<u>Insertion:</u> The fibers pass inferior and laterally at almost 45° angle and insert via four separate tendons onto the external surface just lateral to the angle of the 2nd to 5th ribs (4).

<u>Nerve supply:</u> Anterior rami of 2nd to 5th intercostal thoracic nerve (4).

<u>Action:</u> Elevates the ribs at their costovertebral joint during forced inspiration. It may also be involved in proprioception for the head and neck. Bilateral contraction elevates the thoracic spine (4). According to this author, it is a strong stabilizer of the cervico-thoracic spinal junction.

<u>Sign of weakness:</u> Patient may present with a slouched posture and a forward head carriage (4) along with hypertonicity of scalene, SCM, TMJ, pectoral, and upper and mid trapezius muscles.



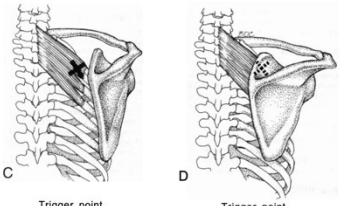


Figure 47.1. Referred pain pattern of a trigger point (X) in the right serratus posterior superior muscle. Essential pain is *solid red*, spillover pain is *stippled red*. **A**, back view of pain pattern. **B**, front view of pain pattern. **C**, scapula abducted, making the attachment trigger point (X) accessible to palpation and injection. **D**, scapula in the normal rest position, and the attachment trigger point (*dashed X*) is inaccessible.

Travell: The Trigger Point Manual Volume 1

Referred pain: Referral of pain is usually felt over the posterior deltoid, long head of the triceps, towards the olecranon and occasionally to the ulnar side of the forearm, hand and to the little finger. Anteriorly, the pectoral region maybe involved. Patient may also feel numbness in the C8-T1 distribution of the hand. The pain is perceived to be deeper in nature than a trigger area that is felt from the middle trapezius. The trigger point referral can be similar to that of the scalene muscle (4).

Comments: Deep steady ache at rest or when moving about which gets worse when lifting objects with an outstretched hand. Laying on the affected muscle can cause the symptoms to get worse due to the scapula pressing against the trigger points of the muscle. Sitting at a desk for an extended period or driving can aggravate the symptoms. Pain in the little finger is a signature sign of the serratus posterior superior trigger point (11).

To get access to the insertion of the serratus posterior superior muscle, the scapula needs to be protruded since at a neutral stance the medial border of the scapula will cover this area (4). Often this muscle gets adhered to the rhomboids causing sharp stabbing pains in the mid-back, and restrictions in breathing (12).

Serratus Posterior Inferior (General information):

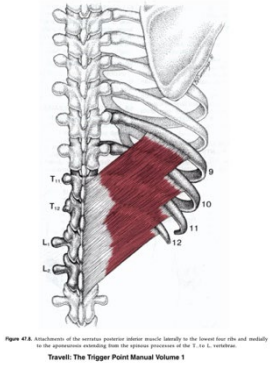


Figure 47.8. Attachments of the serratus posterior inferior muscle laterally to the lowest four ribs and medially to the aponeurosis extending from the spinous processes of the T. to L. vertebrae.

Travell: The Trigger Point Manual Volume 1

Origin: Arises from the aponeurosis of spinous process of T11-L2/3 vertebrae. It also blends with the aponeurosis of the thoracolumbar fascia as well as the latissimus dorsi muscle (4).

Insertion: The fibers pass superiorly and laterally into 4 digits attaching into the 8th to 12th ribs just past the angle of the ribs (4).

Nerve supply: Anterior primary rami of 9th to 12th thoracic nerve. T9-11 intercostal nerve and T12 subcostal nerve (4).

Action: Acts to move the ribs posteriorly and inferiorly to assist in extension and rotation of the trunk and may contribute to inhalation and forced expiration along with the quadratus lumborum, latissimus dorsi and internal abdominal oblique. Helps to depress the ribs (4).

Contributes to the movement and stabilization of the thoraco-lumbar junction by being a synergist with the iliocostalis and longissimus thoracic muscles on the same side. Unilateral contraction rotates the thorax to the same side and bilateral contraction extends the vertebra at

the thoraco-lumbar junction. It may also be involved in proprioception for the thoraco-lumbar junction. According to this author, it is a strong stabilizer of the thoraco-lumbar spinal junction.

Sign of weakness: Unilateral weakness will rotate the thorax anteriorly. Bilateral weakness will cause an increased kyphosis at the thoraco-lumbar junction. Often, there will be presence of compensatory muscle imbalance in the diaphragm, pelvis, abdominal and low back region along with muscular hypertonicity of the pectoral and trapezius and rhomboid region.

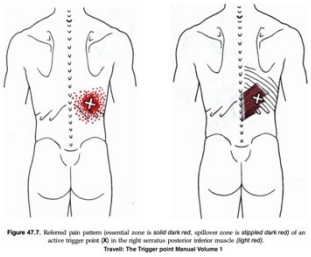


Figure 47.7. Referred pain pattern (essential zone is *solid dark red*, spillover zone is *stippled dark red*) of an active trigger point (X) in the right serratus posterior inferior muscle *(light red)*.
Travell: The Trigger point Manual Volume 1

Referred pain: Produces an aching discomfort over and around the muscle which can extend across the back and over the lower ribs.

Comments: It is one of the many back muscles that can be strained during a combined movement of lifting, turning, and reaching and if this muscle is not anchored, there can be a lingering sensation of pain even after the other surrounding muscles have been stabilized.

The trigger point of this muscle can be mistaken for a sign of kidney distress. When this muscle is hypertonic it will tend to restrict movement, especially bending and twisting (13). Often this muscle gets adhered to the erector spinae resulting in restrictions in breathing, low back pain, and limited active range of motion (12).

Muscle test for the Serratus Posterior:

In PAK, the objective of the muscle test is to isolate the action of a specific muscle and prevent or reduce recruitment from surrounding synergistic muscles. For this to happen, the origin and insertion of the muscle needs to be approximated for maximum effectiveness (14). Due to the location of the serratus posterior muscles, it is a challenge to test it in this manner.

There are many muscle tests in PAK which do not take full advantage of the origin and insertion approximation. Instead, a long lever approach is utilized where the direction of the force for the test is applied on a body part which is not directly attached to the muscle.

The following is a list of some of the muscles that are tested in a long lever fashion:

• Serratus Anterior	• Subclavius	• Popliteus
• Piriformis	• Rhomboid	• Quadratus Lumborum
• Mid trapezius	• Lower trapezius	• GIGO muscles
• Infraspinatus	• Latissimus Dorsi	• Levator Scapula
• Subscapularis	• Teres Minor	

The Muscle Test that is being proposed for the serratus posterior will utilize the long lever approach.

Serratus Posterior Superior (Proposed muscle test):



Patient position for the muscle test: Patients' arm is along the side of their thorax with the elbow bent to 80°. Patients' shoulder/AC joint is slightly retracted with a slight elevation as to create some approximation of the origin and insertion of the SPS muscle.

Stabilization: At the top of the shoulder.

Testing hand position: Soft contact at the medial aspect of the elbow.

Direction of force: Ask the patient to gently push posteriorly and slightly medially while the doctor counters with an anterior and lateral force to abduct the arm in an arch.

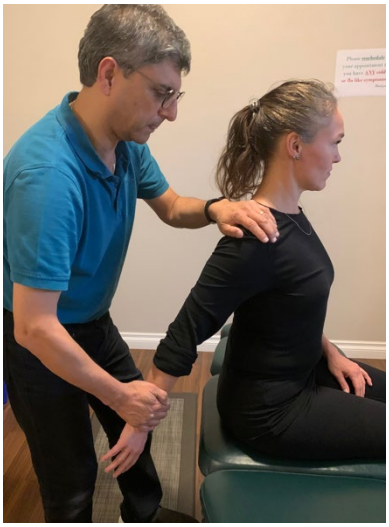
Common errors: The patient will attempt to protract the shoulder, lean into the test, or flex the elbow to recruit the bicep muscles. Avoid bony contact over the olecranon.

Sign of an inhibited muscle: The testing muscle will not lock and give away. In a person with over developed shoulder muscles, a weakness in the SPS muscle can still be noted by feeling for a bulging in the belly of the muscle during the application of the test.

Organ relationship: Liver as the SPS muscle fibers are in line with the rhomboid and an inhibited SPS muscle facilitates to the liver Chapman reflex.

Comment: To determine if the muscle inhibition found is from the SPS and not the rhomboid, have the patient therapy localize to C6 to see if it facilitates. If it does, then there is a high chance it was a SPS inhibition and not rhomboid since the rhomboid attaches to C7.

Serratus Posterior Inferior (Proposed muscle test):


Patient position for the muscle test: With the elbow fully extended, the patient's shoulder is slightly retracted with a slight inferior direction as to approximate the origin and insertion of the muscle. With the arm being posterior to the body, abduct the arm to approximately 30° with the palm facing posteriorly.

Stabilization: At the top of the shoulder.

Testing hand position: Soft contact on the radial aspect of the testing arm proximal to the wrist to avoid any hard bony contact.

Direction of force for the muscle test: Ask the patient to push their arm medially and slightly anterior towards their hip while the doctor counters this with a lateral and slightly posterior force in an arch to abduct the arm. This author finds that by tapping the patient's hip prior to the test gives them a better understanding of the direction they need to push towards.

Common errors: The patient will attempt to bend their elbow, bring their shoulder and arm anteriorly to try and recruit other muscles.

Sign of an inhibited muscle: The patient will not be able to resist the pressure applied and the testing arm will move in a lateral and posterior direction.

Organ relationship: Pancreas as the muscle fibers of the SPI are in line with the latissimus dorsi and an inhibited SPI muscle facilitates to the pancreas Chapman reflex.

If unable to test muscle due to shoulder restriction:
If the serratus posterior is unable to be tested due to shoulder restriction and this muscle is suspected to be inhibited, palpate into the pectoralis muscles for the SPS and lateral ribs for the SPI. If they are tender to palpation, see if it decreases by bringing the body into extension as well as retracting the shoulder posteriorly.

Another way to determine if the SPS or SPI is involved is by gently pressing into the origin or insertion of the SPS or SPI and then pushing it either towards or away from the belly of the muscle. If it is involved either of these maneuvers will decrease in tenderness at the pectoralis muscle or lateral rib area.

Therapy localization to the spinous process at the level of the origin of the SPS and SPI to see if it facilitates other inhibited muscles found during the initial structural evaluation. Since there are many other structures that attach to the spinous process, it is important to ascertain if there are other reasons for the inhibition.

Incorporating the serratus posterior muscle into practice:
During the ICAK convention at Montreal Canada in May 2023, this author presented the serratus posterior muscle. During a patient demonstration, many muscle inhibitions were found in the upper and lower extremity, palpatory tenderness in the traditional fibromyalgia regions, along with neurological disorganization. It was also determined that there was a TMJ involvement.

Instead of addressing the TMJ, the SPS and SPI muscles were treated after which the previously inhibited muscles were retested to see if there was any change. Many of the inhibited muscles in the upper and lower extremity were now facilitated and the neurological disorganization was no longer present. However, the TMJ issue remained.

From this example, it was shown that many of the inhibitions found in the patient demonstration were secondary and by treating the SPS and SPI, the more primary issues came to the surface.

This author has seen many other similar cases where initially treating and anchoring the SPS and SPI muscles helped to reduce many inhibited muscles found during a structural assessment as well as improve range of motion, rib expansion and decrease pain tenderness.

Due to the transitional nature of the cervico-thoracic and thoraco-lumbar spine, an imbalance here will create a spinal torque and other muscles will compensate accordingly to help protect this instability. Once it is not able to manage this instability, symptoms of pain will appear.

SPS and SPI are two different muscles which are winglike in shape and are mirror images to each other. Interestingly enough, there is a spinal Lovett brother correlation where the C6-7 origin of the SPS corresponds with the T11-12 origin of the SPI.

With its attachment at the cervico-thoracic and thoraco-lumbar junction, an imbalance here can have an impact on neurological disorganization due to it being in structural alignment with the K27 junction as well as the umbilicus. An interesting concept to further ponder upon.

There are many ways to treat the muscle and it is recommended for the reader to use the one that works best for him/her. This author typically treats the muscle at the golgi tendon organ to anchor it at the origin and insertion points. If the spindle cells need to be treated, then it gets addressed. Range of motion in a passive and active manner can also be added when working on the golgi tendon organ to enhance the treatment. Isometric exercise, which is basically in the position of the muscle test, are very helpful in anchoring the SPS and SPI to their respective transitional segments at the spine. After that, isotonic exercises can be prescribed to strengthen the various muscle groups in the region.

Conclusion

Serratus posterior superior and serratus posterior inferior muscles act as strong stabilizers of the cervico-thoracic and thoraco-lumbar junction respectively and should be considered in the overall structural evaluation of our patients. Once corrected they can mitigate many compensatory muscles thus freeing the practitioner to concentrate more on the deeper underlying cause of their patient's condition.

The concept of the serratus posterior muscle is currently not discussed in an official manner within PAK. However, it is widely discussed amongst many other disciplines.

The goal of this paper is to introduce the serratus posterior muscle so that this we can start to look at it in a more detailed manner and come up with treatment protocols that can help the members of our profession do an even better job at serving our patients.

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The 12 Meridians of the Heart and the Crossed Psoas Test: Unlocking Master Switching Patterns

Dale Schusterman, D.C., DIBAK

Abstract

This paper will show a new method to activate the heart and how this unlocks master switching patterns. These switching imbalances correlate to the ancestral patterning in which the patient is embedded and can be resolved with a specific movement of energy through the kidney meridians. It is quick, highly effective, and works on a level not previously accessible to most doctors. We will briefly explore the consequences of family bonding patterns and how they affect health. The postulation is that epigenetic factors of family dynamics are at the root of most switching and may be one of the most important factors we need to consider with our patients.

Key Indexing Terms
Psoas, Kidney Meridian, Subscapularis, Muscle Testing, Bonding, Heart Activation

Introduction

This protocol will integrate several systems. The first step is always focusing on the heart. The heart has full knowledge of who we are. In addition, we bond to our family of origin through the heart. The traumatic memories of our ancestors can influence subsequent generations due to this heart connection. Every experience we have is measured against these primal bonding parameters. The subconscious mind says, 'how do I integrate this experience in a way to stay in resonance to my family.' Identification with painful ancestral memories causes the child to experience life in a way that validates these hidden attachments. Resolving traumatic bonding patterns is essential. Secondly, we will balance the kidney meridians which carry ancestral and genetic information. This is the master switching correction.

Muscle testing is a wonderful tool for evaluating the human system, however, sometimes the results of a manual muscle test are inconsistent with what we would expect based on posture, gait, or what we know about the patient. The term neurological disorganization describes these paradoxical findings. The body will always give an 'answer' when we challenge a muscle, but is the answer correct or is there a compensation somewhere else in the system? Dr. Goodheart called this neurological disorganization 'switching.' When a muscle shows inhibition on the side opposite of the postural indicator it has switched sides. Goodheart developed the K27-umbilicus manipulation and other methods as tools to reset these distortions. There are numerous methods to unlock switching and the Collected Papers of ICAK have dozens of papers on this topic. The reason switching is so prevalent in our patients and so important to resolve early in the treatment protocol will become clear in this paper.

Most of our therapeutic interventions are single therapies. We adjust a vertebra, align a cranial bone, tap a deep tendon reflex, do IRT, or rub a Chapman's reflex. This protocol will move energy through the body in an ordered fashion, from step to step, until the pattern is clear.

Discussion

The Heart

There are many things going on in the body and the mind at any one time. So, when we start a dialog with the body, we cannot be sure what set of issues are ascendent. Even in acute situations where the problem is obvious, the wisdom of the body might show that there is a less obvious way to address the issue, or that other hidden traumas might be in play. That is why there are several protocols that dictate an optimal way to start treatment. Dr. Walter Schmitt developed Quintessential Applications to show 'what to do first, next, and last.' He emphasized the need to correct injury patterns, switching patterns, small intestine function etc. before looking into other issues. Dr. Alan Beardall, Dr. Richard Belli, Dr. Chris Astill-Smith, Dr. Michael Lebowitz, and others, all have protocols that demonstrate an order of treatment that makes outcomes more reliable and effective.

The manual muscle test is basically a neurological challenge and much of what we do with a patient is through evaluation of the nervous system. However, if we look at the entire person, we see that the heart can have even greater impact than the nervous system. Both systems are essential and work together, but the heart comes first. We will see this in action when the protocol is explained. From HeartMath:

> *"It is not as commonly known that the heart actually sends more signals to the brain than the brain sends to the heart! Moreover, these heart signals have a significant effect on brain function – influencing emotional processing as well as higher cognitive faculties such as attention, perception, memory, and problem-solving. In other words, not only does the heart respond to the brain, but the brain continuously responds to the heart."*

The heart communicates with the brain and the rest of the body through 4 known mechanisms: neurological, pulse pressure, hormonal, and electromagnetic. HeartMath has compiled and done much of this research. The heart sends information to the medulla, amygdala, thalamus, and many areas of the cortex via vagal and spinal cord afferents. There is an intrinsic nervous system in the heart just like there is in the gut. The heart-brain, just like the gut-brain, can communicate with the central nervous system as coequal partners. In the case of the heart, it can be the dominant player. The heart can sense danger and other emotions, good and bad, before they are registered by the brain.

> *"The heart's electrical field is about 60 times greater in amplitude than the electrical activity generated by the brain. This field, measured in the form of an electrocardiogram (ECG), can be detected anywhere on the surface of the body. Furthermore, the magnetic field produced by the heart is more than 100 times greater in strength than the field generated by the brain and can be detected up to 3 feet away from the body, in all directions, using SQUID-based magnetometers."*

The heart is also an endocrine gland, secreting the hormones, norepinephrine, epinephrine, dopamine, natriuretic peptide, and oxytocin. Oxytocin is the hormone of bonding, social attachment, and connection. It is found in roughly equal amounts in the brain and the heart and is high in the mother and infant after birth, thus promoting the bond between the two of them. The father's oxytocin level also goes up when he experiences skin contact with his child. The attachment of the child to the parents is through the heart. Since there is no intellect or individuation of self in an infant, the bonding occurs at a primal unconscious neurological-heart level.

> *"Research in the relatively new discipline of neurocardiology has confirmed that the heart acts as a sophisticated information encoding and processing center that enables it to learn, remember, and make functional decisions independently of the cerebral cortex."*

Testing the Heart

The subscapularis muscle corresponds to the heart. It is an internal rotator and slight adductor of the humerus. We can test two branches of the subscapularis giving two tests on each side, or four total. The traditional test is to bend the elbow 90 degrees and abduct the arm to shoulder level. Push up on the lower arm against resistance to externally rotate the humerus to activate the muscle. The other test keeps the elbow next to the rib cage with the elbow flexed to 90 degrees. Push outward on the lower arm against resistance to externally rotate the humerus.

Also evaluate the subscapularis for over-facilitation, or hypertonicity. We can't pinch the spindle cells on a muscle covering the anterior surface of the scapula, so we need to use other methods. The easiest way is to test reciprocal antagonists. The opposite to the abducted subscapularis is the infraspinatus. Test the abducted subscapularis quickly followed by the infraspinatus. The infraspinatus should inhibit <u>one time</u> and failure to do so indicates over-facilitation of the subscapularis. The reciprocal muscle for the adducted subscapularis is the teres minor.

It moves quickly to test each of the four subscapularis muscles followed by its antagonist. That way you can assess for facilitation, inhibition, and over-facilitation of all four muscles.

You can also evaluate the subscapularis muscles for a gait type linkage. Since it is an internal rotator, you can internally, or externally rotate the femur to assess cross linkage. Internally rotating the femur should facilitate the two contralateral subscapularis muscles and inhibit them ipsilaterally. You could also externally rotate the femur and test for contralateral inhibition and ipsilateral facilitation. Therefore, the muscles can be normotonic, inhibited, over-facilitated, or imbalanced in a gait posture. Generally, only one of the 12 indicators will show at a time. You need to consider a problem with the heart if you find multiple muscles inhibited.

Each of the four subscapularis muscles can exhibit three different imbalances (inhibited, over-facilitated, or imbalanced in gait). These 12 imbalances are the access points for the heart. They correspond to the 12 acupuncture meridians as shown in the table below. These correlations are based on the activation of the heart described in the next section. It is interesting that the Heart Chakra has 12 petals according to yogic knowledge and they correspond to the meridians and subscapularis tests.

Ab=abducted
Ad=adducted

Subscapularis	Meridian
Rt Ad Inhibited	TW
Rt Ab Inhibited	LI
Lt Ad Inhibited	BL
Lt Ab Inhibited	HT
Rt Ad Over-facilitated	ST
Rt Ab Over-facilitated	KD
Lt Ad Over-facilitated	LV
Lt Ab Over-facilitated	CX
Rt Ad Gait	SI
Rt Ab Gait	SP
Lt Ad Gait	LU
Lt Ab Gait	GB

Breath
Breath work has been around since the dawn of time. Yogic philosophy teaches many types of breathing patterns for health and the expansion of consciousness. Likewise in Qi Gong. Many wisdom traditions advocate breathing practices.

We use breathing in AK to facilitate movement of cranial bones and the vertebrae. Dr. Goodheart talked about single nostril breathing and ionization. Inhaling through the right nostril would increase positive ions and exhaling through the left would decrease negative ions. Inhaling through the left nostril would increase negative ions and exhaling through the right would decrease positive ions. He also correlated specific mineral needs with each phase of nostril breathing.

Yogic philosophy teaches a breathing technique, or pranayama, called Nadi Shodhana. This breathing pattern is a figure 8 movement: inhaling on the right, exhaling on the left, inhaling on the left, and exhaling on the right. This cycle creates balance between the brain hemispheres, sympathetic and parasympathetic nervous systems, and is therefore profoundly centering and relaxing. This figure 8 breathing pattern can be broken down to four breath ionization loops:

In right, out right
In left, out left
In right, out left
In left, out right.

There is a special Mudra used to facilitate this breath technique. The index and middle fingers are placed to the palm so that the nostrils can be closed with the thumb or ring finger. In deference to thousands of years of yogic practice it is recommended to have your patient do the

breathing pattern using the thumb and ring fingers during the alternate nostril breathing. The main consideration is to not use the index finger as that is strongly discouraged.

There are indicators on the palms and soles of the feet for each of the four nostril breath phases. There will be a positive therapy localization (TL) to the bottom of the right foot while a patient inhales through the left nostril. Similarly, there will be a positive TL to the bottom of the left foot while a patient inhales through the right nostril. There will be a positive TL to the left palm while the patient exhales through the left nostril. While the patient exhales through the right nostril there will be a positive TL to the right palm. The indicator only tests positive while the patient is breathing, or if they hold the breath after the individual nostril respiration. The indicators on the feet are opposite to the side of nostril inhalation, and the indicators on the palms are on the same side of exhalation.

Inhale left	Right sole
Inhale right	Left sole
Exhale left	Left palm
Exhale right	Right palm

Activate the Heart

The procedure starts by activating the patient's heart system. First, the patient needs to concentrate on the heart. Everything starts from this prospective, so make sure that the patient is focused on their chest. If a pattern is available to clear, you will find a positive TL to one palm and one foot. This is how the patient needs to breathe. Ask the patient to focus on their heart while they inhale and exhale in the loop that showed positive. For instance, if the left palm and the left sole of the foot had a positive TL, the patient would inhale on the right and exhale on the left, in right, out left and so on until an indicator muscle inhibits. They need to focus on the heart during this breathing. It usually takes just a few breath cycles.

Lt Foot/Rt Palm	In Rt/Out Rt
Rt Foot/Lt Palm	In Lt/Out Lt
Rt Foot/Rt Palm	In Lt/Out Rt
Lt Foot/Lt Palm	In Rt/Out Lt

You can observe the following after activating the heart:

- There will be a positive cross TL to both K27s.
- One of the crossed psoas patterns will test inhibited.
- One acupuncture alarm point will test positive.
- The four subscapularis muscles will test inhibited with a heart focus.
- The two supraspinatus muscles will test inhibited with a heart focus.
- Any TL along the Conception Vessel or Governing Vessel meridians will inhibit an indicator muscle with a heart focus.

The subscapularis and supraspinatus muscles will be facilitated when the patient lets go of the heart focus. Have we caused a weakness in the brain and heart? No, but we have exposed an imbalance of some kind that is common to both.

The next step is to find the positive meridian that has been unlocked by the heart activation. The easiest way is to TL to the 12 meridian alarm points until you find the one that inhibits an indicator muscle. You could also test each of the subscapularis muscles in the clear, with reciprocal inhibition, and the reciprocal gait linkage. The positive muscle pattern indicates the meridian that is involved. Make a note of the positive alarm point as it will be needed at the end of the protocol. It doesn't matter if you TL the alarm point on the left or right side.

The Crossed Psoas Test

There is an interesting phenomenon that occurs when you test the psoas in a certain way. First, test the psoas in the traditional way by stabilizing the opposite pelvis as you push on the elevated, externally rotated, abducted leg. Make appropriate corrections if the muscle is inhibited.

Now do the test again but place your stabilization hand on the opposite thigh or lower leg when you do the test. Often you will find that one side or the other will test inhibited, even if the traditional test is facilitated.

Another way to do this test is to have the patient cross one ankle over the opposite leg near the knee and then push the flexed knee outward against resistance. This is like a psoas test with the lower leg flexed and crossed over the other side. This test should be the same as stabilizing the thigh or lower leg while testing the psoas. The side of weakness indicates involvement with the mother's or father's family patterning. We will discuss this below.

The crossed psoas test is probably the best way to diagnose switching. Do the crossed psoas tests on your next 10 patients before you do anything else, and you will probably find most if not all show this pattern. The best way to fix the crossed psoas test is to start with the heart activation. Then you can balance the crossed psoas.

Ramifications of the Crossed Psoas

The way to temporarily facilitate an inhibited crossed psoas test is to TL to K27 on the side of

crossed psoas weakness with the opposite hand). It only works that way. So, if the right crossed psoas inhibits, cross the right leg over the left leg and touch right K27 with the left hand.

The positive crossed psoas creates some interesting findings. When you cross the positive leg over the other one, there will be failure of autogenic inhibition (AI) in all muscles. In addition, there will be failure of autogenic facilitation (AF) in all muscles. Both findings show at the same time! In other words, pinching the spindles cells will not inhibit a facilitated muscle and separating the spindle cells will inhibit the muscle. This is a paradoxical finding as muscles test both over and under facilitated at the same time.

The Crossed Psoas Pattern
This protocol moves energy from one point to the next, so the steps need to be done in the proper sequence without letting go of the previous step.

Once you activate the heart, as shown above, you are ready to complete the circuit through the crossed psoas pattern. The doctor or patient TLs to the positive alarm point. This will inhibit an indicator muscle. Cross one leg over the other. If it facilitates the indicator, then this is the crossed psoas. If not, then cross the opposite leg. You could also identify the positive crossed psoas before doing the alarm point TL. The side that neutralizes the alarm point weakness is the positive crossed psoas. Once you cross the leg you can remove the alarm point contact.

Next, TL to K27 on the side of crossed psoas (the leg on top) with the opposite hand. So, if placing the right leg over the left leg facilitates the alarm point, have the patient touch right K27 with the left hand.

Next, place the free hand to the opposite K27 so that both hands are crossed on K27. Make sure the two hands/wrists do not touch each other. Then switch the legs so that the opposite, non-involved leg is on top (left in this example). Remove the first K27 contact, the hand corresponding to the side of the top leg (left in this example). This is the opposite crossed psoas pattern from where you started (left cross/right hand on left K27). Use the free hand to TL to the alarm point (either side of the body). This alarm point TL will cause an indicator muscle to inhibit. Just hold this TL until the indicator facilitates. Then the pathway is cleared. There are several steps, but it becomes very fast to perform after you have done it a few times. It takes less than a minute to do the entire sequence.

Here are the directions to correct the right crossed psoas inhibition pattern. (Do the opposite for the left crossed psoas.)

1. The patient focuses on their heart while the doctor tests the palms and soles. One palm and one sole will test positive (if there is a pattern to clear).
2. The patient breathes according to the pattern designated by the palm and sole that tested positive, while focusing on their heart. Stop when an indicator muscle inhibits.

Lt Foot/Rt Palm	In Rt/Out Rt
Rt Foot/Lt Palm	In Lt/Out Lt

Rt Foot/Rt Palm	In Lt/Out Rt
Lt Foot/Lt Palm	In Rt/Out Lt

3. Test the 12 alarm points, or the subscapularis muscle patterns, to find the positive meridian.
4. TL to the alarm point and cross one leg over the other until you find the side that neutralizes the indicator weakness (right leg over the left in this example)
5. Place the left hand on right K27.
6. Place the right hand on left K27. Hands and wrists don't touch each other.
7. Switch the legs so that the left leg is now crossed over the right leg.
8. Remove the patient's left hand.
9. TL (doctor or patient) to the alarm point found in step 3 and hold it until an indicator muscle facilitates.

Once you start the crossed psoas sequence you must do it in order. If the patient lets go or you make a mistake, just start again with the alarm point TL, crossing the leg, cross TL to K27, and so forth. You are moving energy from the heart to the meridian, through the kidney circuit, and finally to the alarm point of the meridian associated with the heart. It must be done in an uninterrupted sequence.

When the patient touches the second K27 point it is good to put your hand on top of theirs. That way when you ask them to pull the other hand out, they know which one you mean. People sometimes get confused about which hand is right or left when they are touching the opposite sides of the body! Once you get to the alarm point just hold it until an indicator facilitates. It is now OK for the patient to let go of K27 and uncross their legs. Once you reach the alarm point, the other contacts are no longer needed.

Start the process again with the patient focusing on the heart while you test the palms and soles of the feet. Continue balancing the heart patterns until it doesn't activate (no TL to either palm or sole). If you want to work on a specific problem, start with a TL or other stressor and then run the procedure beginning with the subscapularis/heart focus. This brings your specific issue into the heart for processing.

Next Steps

There is another step you can do once a heart focus no longer activates a palm (or sole) TL. Rub the visceral referred pain area to the heart, down the medial side of the left arm to the little finger, and then test a subscapularis muscle. If it inhibits, or becomes over-facilitated, do injury recall technique (IRT) if far vision facilitates the subscapularis, or activate a deep tendon reflex (DTR) if near vision facilitates the subscapularis. Also, pinch down the heart VRP and then test the subscapularis. If it inhibits, then fix it with IRT or DTR as your visual test indicates (far or near). When these patterns are clear, go back and see if focusing on the heart opens a palm and sole indicator. You can go back and forth from the heart focus to the heart VRP challenges with the subscapularis until all patterns are clear.

When you are done, check the patient for any of your other therapies. You might be surprised at what is no longer needing help and what now shows up as the next thing to correct.

Familial Bonding

In 2000 I met Bert Hellinger, a German psychotherapist and former Jesuit who had made many observations on the effect of family bonding on the emotional and physical health of individuals. This work can be very transformative, and I have been successfully working with these patterns in myself and with patients since 2000. This crossed psoas/heart pattern eases the results of these unseen dynamics. It is not necessary for you to understand family dynamics, or to even 'buy' the idea of this concept. The procedure is a technique you can apply to help balance your patients in a new and effective way. The mechanism and types of bonding issues (attachments) will not be covered in this paper other than a few basic principles. Recommended books for developing a better understanding of family dynamics and entanglements are listed in the endnotes.

When a child is born, s/he bonds deeply to the mother and father. Much of this is genetic, however there are also epigenetic factors that the child carries from the consciousness of the family group. We are born into a 'field' of information that belongs to a large group of individuals that came before us. We carry thoughts and feelings that are not ours per se but belong to the group from which we emerge. We incorporate them as our own as we move through life. This occurs whether we know our parents or not and is not dependent on them being good, or bad parents.

Being born has consequences. Good genetics, healthy parents, and happy ancestors can reap good consequences. However, the child usually gets a mixture of good and challenging genetics, parents with various relationship and other issues, and two distinct family lines with unresolved traumas and losses, and sometimes conflicting values. The child doesn't choose these factors, except perhaps on the soul level. The child integrates the two genetic strains, the relationship of the parents, and the combined family histories into one expression of his/her life. This is why we are all so different, and complex. The newborn child takes life with all these parameters, for better or worse. The initial programming of the child is unconscious, pre-verbal and sets a firm blueprint for experiencing life. The child is bonded through the heart with love, to this system, and this effects the growth, development, and choices one makes in life. As the child matures into adulthood s/he might love, or hate, emulate, or act in opposition to the parents, but this does not change the initial bonding posture of the child to his/her system. We integrate every experience in life in a way that maintains a subconscious connection to the original bonding to the family—even if the results are poor health and carry painful life consequences. We do not see the bonds that we carry, but we certainly experience their results.

A family is a group that extends over generations where the rules of group dynamics apply. One of these major rules is that everyone has the right to belong. Sometimes someone is excluded from the heart of the group through rejection, trauma, early death, or other life event. It is important that the other family members keep the excluded person and their fate in their hearts, for the health of the group. If this is not done, and often the trauma or event is too hard to process, the next generation feels the need to compensate for the excluded family member. When a child bonds to the unresolved pain from previous generations, it can dictate poor life choices and health consequences. This is difficult to treat since no one may know why it is happening.

Here is one small example of how this works. A patient comes in with a chronic shoulder problem. You correct injury patterns, balance the muscles to the shoulder, realign the pelvis, correct cervical subluxations, and give appropriate nutrition. The patient returns and says she is 50% better. You then find there are fungal problems, gluten intolerances, etc. and this provides more improvement. Then you find the patient carries a lot of grief and sadness and there have been many losses in her life, especially recently. Sadness and grief effect the lung meridian/deltoid muscles thus destabilizing the shoulder. This leads you to explore Neuro Emotional Technique (NET) or give flower remedies or recommend counseling. All these things help but do not provide complete relief. Unresolved ancestral patterning may be the missing link. You can explore these patterns by having the patient say the following statements and test an intact muscle to observe the response.

> "Dear mom, when my shoulder is healthy and pain free, I feel connected to you and your ancestors with love."
> "Dear dad, when my shoulder is healthy and pain free, I feel connected to you and your ancestors with love."

One of these statements will often inhibit the indicator muscle. This is a psychological reversal demonstrating a bonding entanglement with something unresolved in the family history. When you ask the patient what happened in her mother's family (assuming the mother statement caused the indicator inhibition) she then tells you that her mother's older sister died at 1 years of age. She never knew her older sister. When a child dies at age 1 it is often hard for the parents and siblings to fully grieve this loss. There is no blame for that, but the result is that the next generation feels the unresolved loss and feels attached to this grief.

When the child grows, and s/he experiences the sudden loss of a friend or relative it triggers this deep unresolved grief. The child's subconscious mind says, 'I will be overwhelmed just like my grandparents and mother so that I can feel like I belong to my group.' If all we are doing is balancing the various distortions that we find in the patient, we miss the deep underlying love of the child to identify with the dead aunt and to carry the pain of the grandparents, and others involved.

Attempting to help a patient that has his/her infant programming locked into a detrimental posture towards its familial history provides limited results. The heart-crossed psoas procedure works towards easing these hidden bonds. Many entanglements with ancestral traumas are very deep and keep people busy their entire lives, but these procedures can start to bring some relief. Psychological counseling, the constellation work of Bert Hellinger, other therapies, and our AK work will all be needed.

The Crossed Psoas and Family Bonding Patterns

Many years ago, I learned that when a patient crosses the right leg over the left leg it would connect the person to the 'field' of their father. Crossing the left leg over the right leg connects the patient to the mother's field. You can do the experiment of visualizing your mother with her parents behind her and their parents behind them while you have the left leg over the right leg

and test an indicator muscle. It should inhibit due to the resonance of the visualization with the crossed legs. The same goes for visualizing the father's family with the right leg over the left. The right crossed psoas weakness indicates issues connected to the father's family. The left crossed psoas weakness indicates issues connected to the mother's family. The family is not the cause of the problems. It is the patient's bonding posture, or unconscious identification to the unresolved issues that needs correcting. It is impossible to change the past, but we can change how we relate to it.

These techniques can be used without any investigation into family patterns, however knowing how the dynamics work can be very useful to help untangle these patterns. Most patients need several sequences of this work, but some might need much more. Have the patient focus on an issue, or TL to a problem and then run the protocol. It is a great way to work on psychological, or energetic patterns. But use it for any positive TL and especially in chronic problems. The problem is chronic because there is something in the heart-mind of the patient that is encumbered. Keep running this protocol with a focus on the chronic problem until no more crossed psoas tests are positive. Afterwards, you might find new structural or other issues related to the problem that you could not find before. Once you erase the hidden programming, the body is much clearer in showing its needs.

Conclusions

This heart/crossed psoas protocol changes the infrastructure that supports the patterns that bring people into our offices. People often state that they feel very relaxed, or expanded, after a few of these 'circuits.' It brings clarity for the next steps in the AK evaluation. Hidden attachments programmed in at birth act as blind spots than can derail even the best doctor. Getting well might threaten a person's unconscious connection and loyalty to some unseen, attracting force. This puts both the doctor and patient at a serious disadvantage. There are many factors in illness, but one of the few unaddressed areas is how the patient's family dynamics support, or even require, the condition.

The heart guides the brain as it contains the essence of who we are. Every wisdom tradition views the heart as the central focus. We feel love, gratitude, and peace in our heart. It is also where we feel emotional pain. We bond to our family of origin through the heart, even if it is unconscious or unacknowledged, and even if we never knew our parents.

We are embedded in much larger fields of information and knowledge than we consciously understand. Almost anything that we work on in the body, or mind, has roots in the consciousness of our family of origin. Our parents are not individuals in this sense. They are portals to the bonds behind them going back generations. Traumas occur at different times in one's life, but an individual's response to the trauma is predicated, in part, on the initial programming. There are many good techniques for resolving trauma, but we also need to work on what the injury connects us to in our family history. It is the newborn infant that bonds to the family, not the adult. The adult has symptoms, issues, etc., but bonding occurs at birth. The infant's posture to its family is running the show. There will always be a limit on how healthy or whole we can become until we address the hidden dynamics that come with our gift of life.

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The Ileocecal Valve Syndrome: The Great Imposter

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Abstract

This clinical entity has been part of Applied Kinesiology since 1967. It first appeared as an article in The Digest of Chiropractic Economics, Volume 9, Number 6, May-June 1967.[1] Later it is presented in Dr. David Walther's book Applied Kinesiology: The Advance Approach in Chiropractic.[2] Its importance and understanding cannot be ignored. I titled it the Great Imposter, because of the myriad of symptoms that it can produce.

Introduction

Dr. George Goodheart begins by saying that many individuals have symptoms or disturbances of this structure and its function. He then describes its location at McBurney's point in the lower right quadrant and states that the small intestine a one-way action and its reciprocal action of the large intestine. The number of symptoms listed by Walther were a total of sixteen,[3] making the confusion both to the patients and their treating physicians medical or chiropractic.
In Goodheart's paper he makes light of the mesentery which supports the ileocecal valve contributes more to the support of the chiropractic physician and his family than it does to the patient's poor viscera. The source of this condition is the stretching of the mesentery through the following overeating at holidays, eating too much roughage and carbonated beverages, overwork producing gravity fatigue, emotional upsets disturbing Vagus nerve and lower dorsal sympathetic balance, and any form of stress from (physical, mental/emotional, chemical, thermal, acoustical).[4]

The keynoted feature of this condition is sudden pain with what I call no rhyme or reason, such as I just bent over and it hit me in the back, I went to bed fine and could not get up in the morning, other symptoms mentioned where, "I bent over and couldn't get up", heart fluttering, chest pain, and right shoulder pain.

Other areas of structural problems were discussed as Reflex subluxation are often found as second or third lumbar and fourth and fifth dorsal. These should not be adjusted for position. If treated will quickly reappear within a few minutes.[5] All information contained was very useful, before the advent of Therapy Localization (T.L.).

Discussion

I have been involved and treating this syndrome for over fifty years. I have seen every one of the lists of sixteen symptoms in myself, my family and in my patients. I will give the list of all the symptoms that appear in Walther's, Applied Kinesiology: The Advanced Approach in

Chiropractic from page 212: Shoulder pain, sudden low back pain, pain around the heart, dizziness, bursitis, Pseudo bursitis, Pseudo sacroiliac strain, tinnitus, nausea, faintness, Pseudo sinus infection, Pseudo hypochlorhydria, headache, sudden thirst, pallor, dark circles under the eyes. Additional signs swelling under the right eye on the Malar Bone (cheek), Heart burn.[6] Other structural joint that can cause symptoms are at the foot, ankle, knee, and hip. The upper extremities can also be involved, elbow, wrist and hand and fingers. Gastrointestinal problem can be caused are irritable bowel syndrome or (IBS), and Leakey Gut Syndrome. Goodheart spoke of gas pressure in the colon could blow open the sphincter or valve and the peristalsis cause regurgitation of the colon content into the Ileum, which is more absorbing toxin from protein digestion of arginine and lysine, which produce cadaverine and putrescine.

The treatment was described as a simple stretch reflex until a definite pulsation is felt under the fingers. Hold for about 30 seconds. With the patient in the supine position, take both hands and grasp the tissues of the lower right quadrant and sharply lift the tissues with a quick jerk. Repeat this five times.

Goodheart stated, "in our experience fully 50% of all acute cases that enter our office complain of this syndrome". I would say that when I started practice in January 1969, this is about the same percentage I was finding. However, the percentage started to increase to closer 80%, and currently in 2024 it is nearly 100%. I would like to use a copy of the entire article which is two pages long, but I have not found who has the reproduction right of this book, which is titled "collected published articles and reprints" Revised Edition, Copyright 1992. This book contains 60 papers published by The Digest of Chiropractic Economics and some other publications from the 1960's through 1990's.

My exposure to Dr. Goodheart occurred just before graduation from The Chiropractic Institute of New York in August 1968. The American Chiropractic Association had their national meeting in Manhattan at the Americana Hotel, 52 Street and 6th Avenue. At this convention, Dr. Goodheart was one of the keynote speakers.

When I started my practice in Jersey City on January 1969, I started studying Applied Kinesiology with three chiropractors, Salvatore Cordaro, DC, Jerald Deutsch, DC and Jose Rodriguez, DC, that taught under the name of CDR Seminars. The information being presented came from the teacher attending seminar taught by Dr. Goodheart. The use of his work published in the Digest of Chiropractic Economics about 1964 through 1976, when Dr. David Walther, DC, organized the Dr. Goodheart information into his first book, and then into a teaching program with slides and notes.

Currently member of ICAK-USA, will have finished at least a basic 100-hour course in AK and have been using the original treatment diagnostic and treatment system. This consists of the two different system for Open and Closed types of ICV-Syndromes. These consist of the indicator muscle weakness of (Right Iliacus-Open), and Right Quadriceps and Rectus Abdominal-Closed). The other reflexes that are used are Neurolymphatic-NL, Neurovascular-NV, Acupuncture point and stress receptors.[9] The use of Therapy Localization was not introduced to AK until 1974.[10]

Method

While studying AK I was introduced in the CDR Seminar to a method that became known as the Quick Close method, used only for Open-ICV. A series of acupuncture points are stimulated on the right side only with a circular rubbing pressure with the doctors using the fingers tips in a firm circular action for at least ten seconds.

1. Right side foot stimulated with firm pressure over ST-43 and GB-41.

2. Right tibia shaft ST-39 and Right wrist LU-9.

3. Right-side ST-25 and Right-side LU-1.

4. Van Rump Flick on the malar cheek bone downward movement.

This method I have used on and off for the past fifty years and it has consistently worked and corrected this syndrome.[11]

Cranial Faults

Walther stated that the Closed Ileocecal Syndrome is associated to the Universal Cranial Fault. I also noted that a positive TL to McBurny's Point was negated by inspiratory assist but did not correct the problem.

It seemed reasonable to me that there should be another Hologramic cranial fault present with the open ICV. So, I started to investigate this theory, which lead to my finding present in the Collected Papers of ICAK, in 1987 "A New Class of Hologramic Cranial Faults".

The cranial fault is challenged along the later side of skull contact from the mastoid-parietal-frontal regions one side will have a forward pressure that does not weaken a strong muscle. The opposite side will have the same region of contact with a posterior pressure that does not weaken on the phase of inspiration. This direction will also eliminate the positive TL to the ICV.

Conclusion

The corrections with the acupuncture points described in the Quick Close Method along with the Hologramic Cranial Fault method corrects the open ileocecal valve syndrome. I have used this method on and off and have taught patients how to use the Quick Close Method on chronic case. I also believe that the closed ICV will also have a series of acupuncture points that will do the same thing and I am currently investigating what this point will be. I will report back after I check at least 100 cases. In the last few months, I have seen an upsurge of ICV-syndrome. As I mentioned it is nearly 100%, or at least nine out of every ten patients treated. In the last three weeks ending today 3/9/24. I have treated at least sixty cases most of which are the open variety. At the point I want to mention three specific case myself being one of these incidences. The first is a colleague I have treated at least once a month as maintenance service. He had to stop seeing patients due to the pain he was experiencing with ICV syndrome, and he has been improving

slowly. I treated him on this past Thursday 3/7/24, in the morning. I had to ask him to check my right thumb due to extreme pain. I had no injury and I knew it was caused by the ICV. The third case has been a patient for at least 25 or more years, with a chronic history creating a disability that she cannot work or even function much of the time. I treated her this past week on Tuesday and I had to spend 47 minutes to stabilize her pain patterns 3/5/24. The cause was an open ICV. She came back on Saturday 3/9/24, telling me her pain patterns had reoccurred as she drove home. Today the finding changed from an open ICV, to a closed type. I made some new discoveries and will present this information next year in a research paper. So, my sub title of this current paper is "The Great Imposter" really fits what I have been seeing in practice.

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Treatment of Cuboid Syndrome Utilizing Chiropractic Care, Applied Kinesiology (AK) and Adjunct Techniques: A Case Study.

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Abstract

Objective

The objective of this paper was to determine the effectiveness of Applied Kinesiology techniques and other AK based techniques in the treatment of acute right foot pain.

Clinical Features

A 42-year-old woman presented with acute right foot pain that remained local after a workout the previous day.

Intervention and Outcomes

Manual muscle testing (MMT) along with AK and chiropractic-based techniques were performed to locate and treat fixations and neuro-muscular inhibitions. In the conclusion of one visit, the patient's right foot pain was fully reduced.

Conclusion

In addition to chiropractic care, the use of MMT and AK-based techniques demonstrated a full recovery in a single visit. This case report visualizes a successful treatment of cuboid syndrome. Research benefiting cuboid syndrome solely and with one specific technique would benefit future treatments of this condition.

Key Indexing Terms

Applied Kinesiology, Cuboid Syndrome, Lateral Foot Pain, Manual Muscle Testing, Chiropractic

Introduction

Cuboid Syndrome is a common condition that arises throughout the offices of specific musculoskeletal providers. Although common, cuboid syndrome tends to be misdiagnosed, leading to improper rehabilitation and overall treatment.[1] This can be attested to the fact that this condition falls into the category of a “syndrome” which is defined as, “a recognizable complex of symptoms and physical findings which indicate a specific condition for which a direct cause is

not necessary understood."[2] Cuboid syndrome is a disruption or subluxation of the calcaneocuboid joint articulation resulting in dysfunction of its normal structural congruity.[3] This syndrome is also linked to other terms for lateral midfoot pathology including, peroneal cuboid syndrome, locked cuboid, subluxed cuboid, cuboid fault syndrome, and dropped cuboid.[3,4.]

The origin of Cuboid Syndrome can be a result of the following: lateral ankle sprains, excessive body weight, inadequate recovery, ligament laxity due to repetitive foot and or ankle traumas, training on uneven surfaces, improper footwear, structural genetics, and can occur at random. [4,5.] Thirty-eight to forty-five percent of all athletic injuries are accounted for as lateral ankle sprains.[1] This gives them the title of the most common injury in sport. Lateral ankle sprains are a result of excessive inversion and plantarflexion of the ankle. Upon proper treatment and rest, 40% of patients who experienced this type of injury also had residual symptoms.[6] There are no precise signs and symptoms that determine the exact diagnosis of cuboid syndrome. Rather, a variety of multiple indications could rule in a magnitude of diagnosis. Such as, specific pain located in the medial arch and the 4th metatarsal, and/or directly over the cuboid. Other indications include, pain along the peroneus longus tendon[6], and/or pain with resisted passive and active inversion and eversion of the foot and ankle. [4,5,6.] Since the exact mechanism of injury could vary from an acute injury, residual pain, or at a random occurrence, cuboid syndrome may be misdiagnosed or treated incorrectly. Conditions such as personal tendonitis, cuboid stress fracture, fibularis tendon subluxation, and extensor digitorum brevis tendonitis can all present in the same manner as cuboid syndrome and need to be considered as differential diagnoses.[7] Diagnosis is based on history, with no definitive imaging techniques that could rule in CS.[1,7] Since Cuboid Syndrome is poorly understood and misdiagnosed, healing time can be dependent on patient's symptomatic presentation.

The purpose of this paper is to describe Applied Kinesiology (AK) treatment and interventions for a patient with acute right cuboid syndrome. To note, short term effects of treatment were assessed. Further research is needed in order to determine long-term effects AK may have on individuals with CS.

Case Report

Patient History

A 42- year-old female presented with a chief complaint of pain in the right foot with difficulty walking. The patient stated that upon waking up that day, she had severe pain in the upper and lateral portion of the dorsum of her right foot. The patient mentioned that she did not recall a particular instance where she hurt her foot. Rather, she stated that the workout the previous day had repetitive jumping and cutting. The patient participates in an exercise activity known as CrossFit. CrossFit is described as a high-intensity workout that involves repetitive exercise with

minimal recovery between movements. CrossFit emphasizes a focus on cardiovascular, anaerobic, weight lifting and functional movements as part of the exercise regime.[8] The patient disregarded getting new footwear. The patient noted that she tends to tie her shoelaces more tight than loose. The patient circled the upper lateral portion of her right foot on the pain location chart that was given. The patient described the pain as a deep ache when putting any pressure on the foot. She also described the pain as sharp and stabbing at rest and when putting pressure on the foot. During the appointment, the patient scaled the pain at a 6/10, with a score of 10 being the worst pain possible. The patient reported a 7/10 at worst, and 2/10 at its best. The patient noted that the pain was worsened by walking or standing for any given period of time. The patient stated 200mg of ibuprofen in the morning made the pain better. She also stated that keeping off the foot entirely improved the pain... At the time of the visit the patient recorded their pain as a 6/10. The patient stated that they were not currently taking any prescription medication or supplements. The patient noted her overall health to be excellent. Along with eating a diet high in protein and equal carbohydrates and fats, she attends CrossFit classes 3-4 times weekly. The patient has been receiving chiropractic treatments the past two years for wellness care. The patient noted that she had a skin lesion removed from her left calf a week prior to the visit. A family history of cancer on both maternal and paternal sides was noted.

Chiropractic Examination

The patient came in on August 10, 2023 for examination and chiropractic treatment. There was no advanced imaging taken.

Range of Motion Examination

The patient's range of motion was measured with a goniometer. The patient's active eversion was measured at nine degrees, inversion 20 degrees, dorsiflexion measured at 10 degrees, plantar flexion 45 degrees. Full active dorsiflexion is 20 degrees, plantar flexion 40-50 degrees, inversion 23 degrees, 12 degrees inversion.[9] Patient reported pain on the upper lateral aspect of the foot during passive and active eversion and dorsiflexion. Isolated range of motion of the cuneonavicular and calcaneocuboid joints was also evaluated. There was also a feeling of stuckness in the joints when moving them in the plantar direction.

Palpatory/Objective Findings

Palpatory tenderness over the right cuboid was noted. Palpation revealed slight swelling around the right cuboid. Palpatory tenderness was measured on a scale of 1-10 with a score of one meaning little to no pain while a score of 10 means maximum pain. Palpatory tenderness was also noted over the 5th metatarsal dorsum surface... No color changes noted. No temperature differentials to note. Palpatory tenderness was also noted over the peroneus longus tendon and dorsal calcaneocuboid ligament. Palpation of the gastrocnemius and soleus showed no positive findings. A 128 hz tuning fork was struck and placed directly over the cuboid, above the cuboid, below the cuboid, and at the dorsum of the foot. All these findings were scaled 7/10. A positive

test would induce pain upon placement of vibration of the tuning fork over the area of injury, which could indicate a stress fracture.[1]

Orthopedic Exams- Foot/Ankle

Patient had a negative Morton's test and ankle dorsiflexion test. These tests determine if a Morton's neuroma or other predisposing factors such as subluxation or stress fractures of the foot.[10] Anterior and Drawer tests were negative. If positive it would indicate tear in the anterior or posterior talofibular ligament or rule in a possible subluxation of the talus.[12] The single leg hop and heel/toe raise testing were positive, indicating the patient was unable to put full body weight on right foot and perform both actions. The patient was unable to fully stand on the right foot without holding on to the side of the treatment table for support. These two tests or difficult or impossible to perform due to pain in the cuboid or lateral aspect of the foot.[7]

Techniques Utilized

Applied Kinesiology (AK) Manual Muscle Testing

Throughout this patient's care, Applied Kinesiology (AK)/ Manual Muscle Testing (MMT) was used to evaluate and determine treatment outcomes. The International College of Applied Kinesiology (ICAK) defines Manual Muscle Testing as the nervous system's ability to adapt the muscle to meet the changing pressure of the examiner's test (ICAK). With the use of Manual Muscle Testing (MMT) and other overall diagnostic standards, AK utilizes specific MMT in order to assess structural, chemical, and mental aspects of one's overall health.[13,14] Injury and/or inflammation in specific joints, spinal levels, and other bodily parts can result in impaired strength in specific muscles.[14] Therefore, it is important for the practitioner to have a dense understanding in anatomy, physiology, biomechanics, and neurology. When an individual is able to adapt to the changes of pressure, the muscle remains facilitated.[14,15.] In contrast, when the individual cannot adapt to the changes of pressure, this is known as inhibition.[14,15.] Understanding facilitation and inhibition gives the practitioner a somatic reflection throughout different neurological pathways by means of MMT[16], therefore leading to proper diagnosis and treatment. When MMT is used in the clinical and the research setting, it is important to consider the following:

- The tester's contact point on the patient should be the same each time.
- The tester's direction of force should be the same each test.
- The body position of the tester should be in an engaged position.
- The tester should avoid preconceived results that could affect the outcome of the test
- The tester should avoid MMT over regions of acute pain, debilitative disease, local pathology, and inflammation.[13]

Applied Kinesiology was the primary technique and evaluation tool used during the treatment of this patient. Within AK, a multitude of techniques are incorporated. During this patient visit, Therapy Localization (TL), Injury Recall Technique (IRT), Shock Absorber Protocol, Sacro-

Occipital Technique (SOT) category blocking, soft tissue-based techniques, specific muscle correlated feet adjustments, and Chapman Reflex integration were all used well.

Neuro-Emotional Technique (NET)

Neuro-Emotional Technique (NET) is founded on the principle of being recognized as an "mind body technique", meaning it has the ability to positively affect one's mental/emotional state and overall physicality. Using MMT, NET can help identify different psychosomatic physiological responses in one's nervous system. This technique emphasizes the concept of consistent, dormant, or unresolved trauma which can contribute to the way in which one lives. Dr. Scott Walker describes NET as a system that integrates principles of a multitude of health modalities and professionals including, traditional Chinese pulse assessment, cognitive behavioral psychology principles, acupuncture theory, and muscle testing.[17] Regardless if an event is a physical trauma to the body, or mental, the body can hold on to the physiological response of that trauma. The body's response to stress in both current and past events can cause neurochemical changes that can alter how the body heals. Therefore, having potential to elicit pain in regions of the body that is not localized to the focal point of the original pain.[18] This technique was utilized to determine any current or past stressors that may be contributing to the acute onset of foot pain.

Frequency Specific Microcurrent (FSM)

The use of Frequency Specific Microcurrent (FSM) was also used in the patient's treatment. Instead of numbing the region of pain, FSM works to restore cellular homeostasis. Utilizing principles of biological resonance and biophysics, FSM delivers currents through two different channels paired with two specific frequencies along a specific area of the body. Channel A targets the condition while channel B targets the tissue. This specific treatment results in the change of cell signaling which ultimately changes the function of the cells.[19] This is due to the principle, "A current closer to the cellular current of the body can overcome electrical resistance of injured or inflamed tissue, restore cellular homeostasis, and facilitate tissue regeneration."[20] Function and pain are directly correlated. Improvement in function results in reduction of pain. FSM was utilized to reduce pain in the lateral foot.

Quantum Neurology (QN)

Quantum Neurology® utilizes light therapy (GRT Light) with specific neurological activation techniques. This is done in order to strengthen and restore one's nervous system in order to function at its ultimate ability. Dr. George Gonzalez created Quantum Neurology on the foundation of finding the neurological pattern created by an injury. This is known as NeuroExpression™. NeuroExpression™ is defined as, "The neurological pattern that is created by an injury, illness or condition."[12] Healing the root of the issue can ultimately heal the cascade of other pain patterns that may present in each case. Quantum Neurology® Rehabilitation was

used to activate specific myotomes and address any sensory or motor changes that may be associated with the right foot pain.

Diversified Technique
Diversified Technique is the foundation of the chiropractic profession. Diversified Technique is a manual technique that provides a high-velocity and low amplitude force into a specific region of the body.[22] This can result in an increase in function and overall quality of life. This technique was well utilized in adjusting the right foot and at the L5/S1 region.

Chiropractic and AK Treatment
The patient was seen August 23, 2023 for an appointment length of 40 minutes. During this visit, the doctor documented the patient's initial objective and subjective findings. Afterwards, the doctor utilized principles of AK and chiropractic to find and correct imbalances.

The doctor utilized Ocular Lock[23] to determine a right lateral C2 subluxation. Using a facilitated right pectoralis major clavicular (PMC), the patient was instructed to move their eyes to the right. This weakened the PMC. With their eyes to the right, the patient therapy localized [23] (TL) the right C2 vertebrae. This facilitated the PMC. The doctor contacted the C2 vertebrae with their right index finger. The doctor laterally flexed the patient's head to the right and rotated it to the left and applied a diversified chiropractic adjustment. In addition to its high velocity-low amplitude (HVLA), the specific line of drive was lateral to medial and superior to inferior.

The Doctor utilized MMT to measure the strength of the right ankle. MMT was performed on the following right ankle muscles: peroneus tertius, peroneus longus and brevis, tibialis posterior, and tibialis anterior. The tibialis anterior showed facilitation. The peroneus tertius, peroneus longus and brevis, and tibialis posterior were unable to withstand the change in pressure. Therefore, they were documented as inhibited. The doctor then approximated the muscle belly of the tibialis anterior with both thumbs to challenge the Neuromuscular Spindle Cells.[23] The MMT was then inhibited. This is indication that the tibialis anterior was functioning properly and could be used as an indicator muscle through the treatment. The doctor utilized the facilitated tibialis anterior as an indicator muscle during the use of the shock absorber test (SAT).[23] With a closed fist, the doctor applied an anterior to posterior (AP) force on the ankle mortise joint. The previously strong tibialis anterior muscle test was now inhibited. After waiting a few seconds, the tibialis anterior proceeded to facilitate when MMT. This test indicates that there was a subluxation present in the ankle. It is important to note that the SAT exam is only used on diarthrodial joints.[23] MMT of the neck flexors was then utilized to determine if the talus had subluxed anterior and superior. MMT showed inhibition of the neck flexors tested as a group. To confirm this finding, the doctor utilized the extraspinal subluxation challenge.[23] Using an inhibited peroneus tertius, the doctor applied slight traction of the talus posterior and inferior. This resulted in momentarily strengthening of the peroneus tertius. Using both thumbs, the

doctor contacted the first and fifth metatarsals. The doctor tissue pulled anterior to posterior, and superior to inferior over the skin until contact was made on the right talus with both middle fingers. Elbows were closed together and a traction was applied with a scooping motion. MMT of the neck flexors were now facilitated and the extraspinal subluxation challenge of the talus was no longer testing.[24] MMT of the peroneus longus and brevis and peroneus tertius were facilitated post adjustment. The tibialis posterior still tested inhibited.

To ensure that all ankle muscles tested were facilitated, the doctor treated the Chapmans Reflex[23] of the right tibialis posterior. The doctor contacted the anterior chapman reflex located on the abdomen 2" above the umbilicus and 1" from the midline bilaterally. The doctor simultaneously applied firm rotary pressure over these two points for 30 seconds. The doctor then waited to feel the pulses synchronize for 30 seconds. This was repeated three times before the pulses synchronized. The posterior chapman reflex was then treated bilaterally with contact on the back between 11th and 12th Thoracic vertebrae laminae. The same procedure was repeated as the anterior chapman reflex. Synchronization of the posterior Chapman's reflexes was accomplished three times. The right tibialis posterior was retested and did not facilitate.

The lack of facilitation of the right tibialis posterior directed the doctor to test low back and/or pelvic disruptions. The patient was treated for a right category 3 (CAT 3)[25] pelvic fault. The previously strong right hamstring MMT weakened when the doctor applied anterior to posterior life on the right Anterior Superior Iliac Spine (ASIS). This was done while simultaneously pushing the L5 spinous process to the side of ASIS contact. While laying prone, the doctor placed one block under the right trochanter slightly facing toward the left shoulder. The other block was placed under the left ASIS. The doctor then palpated the L5 spinous process for pain. When the patient stated they felt pain on palpation, the doctor moved the thick portion of the right block inferiorly. The thin tip of the SOT block was pointed at the 11 o'clock position when pain was felt. While the patient rested on the blocks, the doctor checked for a Sacral Respiratory Fault.[23] Using the right hamstring as a strong indicator muscle, the doctor had the patient hold their breath on full inspiration while MMT the right hamstring. This resulted in weakness. Weakness on full inspiration indicates a right expiration fault. The patient was instructed to hold their breath on full inspiration while the doctor MMT the right hamstring while challenging the sacral apex in multiple vectors. The doctor indicated that an anterior to posterior thumb contact on the sacral apex caused facilitation. The doctor held this contact while the patient repeatedly went through 3-5 full phases of expiration breathing patterns. Correction was determined when the patient no longer weakened to a full inspiration. The doctor then rechecked the tenderness of the L5 spinous process. There was no pain indicated. The doctor continued to move the base of the right SOT block inferiorly and checked for L5 tenderness. Tenderness was reported when the tip of the block was at the 9 o'clock position. While the patient laid on the blocks, the doctor instructed the patient to TL their right iliolumbar ligament. The doctor then pushed the talus headward and observed weakening of the right hamstring. This indicated the need for Injury Recall Technique[25] (IRT). The Doctor proceeded to rub along the iliolumbar ligament while

dorsiflexing the right talus. After IRT, the right hamstring no longer weakened to the IRT challenge. Pain was no longer indicated when palpating the L5 spinous. The right tibialis posterior was facilitated after the conclusion of this specific treatment.

Since the cuboid is not considered a diarthrotic joint, the SAT could not be utilized. Instead, the doctor MMT the tensor fasciae latae (TFL). Inhibition of this muscle can indicate that the cuboid has subluxed laterally. The doctor used their right thumb to pull the tissue lateral to medial over the cuboid. Their lateral hand was placed over the right thumb for additional support. The doctor then straddled the patient's foot, placing it firmly between their thighs. The doctor dorsiflexed the foot, and applied a medial to lateral, superior to inferior thrust.[24] Upon adjustment, the TFL was now facilitated.

Quantum Neurology was utilized to evaluate the strength of the lower body myotomes and pubic bone function. The patient's knees were bent at a 90-degree angle with feet flat on the ground. The Doctor contacted the inside of the patient's knees while the patient was asked to resist abduction. The patient could not. While the patient TL'ed the right pubic bone while this action was performed again. Full facilitation was met. The doctor placed a GRT light [TM 12] at the patient's brain stem for additional support. Using an arthrostim[26], the doctor contacted the right pubic bone while instructing the patient to squeeze their fist with both knees. The doctor applied anterior to posterior pressure with the arthrostim. After correction, full facilitation was met. Bilateral testing of the lower body myotomes (L1-S1) was conducted. Full 5/5 muscle contraction was present bilaterally. The S1 myotome peroneus tertius showed inhibition with deep touch, and hot and cold pressure over the right foot. The doctor used the flat tip of an arthrostim over the lateral aspect of the foot and entire dorsum of the foot to apply deep pressure. Ice wrapped up in a towel was pressed into the lateral aspect of the foot, and on the dorsum. A warm heated towel was then used to replicate the same procedure. Both challenges of temperature and pressure were no longer causing inhibition after treatment.

Frequency Specific Microcurrent (FSM) was utilized to reduce overall pain and swelling in the lateral foot. The specific frequencies that were used included: Channel A: 40 (inflammation), 124 (torn and broken), 30 (irritation), 970 (emotional component). Channel B: 100 (ligaments), 396 (nerves), 142 (fascia), 77 (connective Tissue), 191 (tendons). The current was set as alternating (+/-) with waveform set to gentle. The current intensity was set to 300uA. Each pair of frequencies ran for a total of two minutes each. Total treatment time was 40 minutes. One pad was attached above the lateral malleolus. The other pad was attached on the side of the right foot between the cuboid and the fifth metatarsal.

NET was utilized last in the treatment procedure. The patient TL'ed to the lateral foot which resulted in weakening of the straight arm MMT. This was negated by the doctor TL'ing the patient's neurovascular point for emotions which is the forehead.[25] The straight arm MMT

showed weaking when the emotion of anger was verbalized. With their left hand, the patient contacted the lateral right rib cage with where the liver is located. This was done while holding the right hand on their forehead while processing the anger. After, the emotion no longer weakened the straight arm muscle test. The TL to the lateral foot no longer resulted in weakness.

Chiropractic/Applied Kinesiology Outcomes

Specific notes were taken through the course of the patient's care. Utilizing SOAP (Subjective Objective Assessment Plan) notes allowed for proper documentation and progression of the patient's care. Within this well written documentation, explanation of procedures, exam findings, AK and QN procedures, and the patient's progression of care was noted. After the 40-minute visit, the patient had significant results. The patient had full pain free passive and active range of motion restored in the right foot/ankle. The single leg hop/heel toe raise exams were negative, and the patient was able to put full pressure on the right foot. Palpatory tenderness over the peroneus longus tendon, dorsum of the 5th metatarsal, and the dorsal calcaneocuboid ligament were decreased (2/10). Swelling around the right cuboid had decreased. The patient was able to lace up her shoes, and walk out the office door. A week later, the doctor was informed that the pain never returned.

Discussion

The purpose of this case report was to determine the effects of AK treatments and chiropractic care on managing the pain of a patient with acute Cuboid Syndrome. In this particular case, the acute right foot pain was likely caused due to shoe tightness and repetitive jumping and cutting from the previous day. This is backed up by the fact that the patient did not report any previous lower leg injuries. What also needs to be noted is, the patient had surgery to remove a skin lesion on the left calf the week prior. The patient did not report any post surgical pain or biomechanical issues in the left leg. Yet, subconscious compensation in overall bio-mechanics could have played a role in the right foot pain. Therefore, a full-body approach to care was initiated.

The patient responded immediately to AK treatments and chiropractic care. This is supported by the changes in the pre and post objective and subjective findings. This includes decreased palpatory tenderness in given areas, full passive and active range of motion restored, and reduction in swelling around the right cuboid. The patient also had negative orthopedic exams after the treatment. This includes a negative single leg hop and heel toe raise. Since the diagnostic standards of cuboid syndrome are not a universal standard, it can be determined that acute conservative care was the appropriate management for the case report. This can be supported by negative tuning fork tests, the mechanism of injury, acute vs. chronic pain, objective findings, and negative orthopedic tests.

There was no advanced imaging needed for this case. Cuboid Syndrome is based mainly on patient history and physical examination. Advanced imaging such as MRI and CTs may not determine a diagnosis.[27] This is due to normal variations that exist between the surrounding tissue and the calcaneo-cuboid joint.[27,28.] Although these images may show minor subluxations of the calcaneo-cuboid joint with some swelling, findings may come back normal.[28] Using X-Ray initially can be helpful in diagnosing stress fractures[1], tumors, and other abnormalities when lateral foot pain is present.[7] Based on the research, treatment and diagnosis still heavily relies on the providing medical professional.

Although cuboid subluxation can be determined based on palpation and other objective findings, passive combination joint movements can also be of use including, supination, and pronation.[5,29.] In addition, using the accessory dorsal and plantar glides of the cubonavicular and cuneocuboid joints can also lead to a better understanding of the type of cuboid subluxation present. Plantar subluxations have a decreased dorsal glide[5] while dorsal subluxations have a decreased plantar glide.[5]

Based on the literature, the cuboid typically subluxates in either a dorsal or plantar position in which the specific manipulation of the bone is position dependent. Plantar cuboid subluxation tends to be more common in the literature presented than dorsal cuboid subluxation. Yet, according to the literature, the biomechanics of the nature of injury is technically the same. The most common injuries causing cuboid syndrome are lateral ankle sprains and overall overuse injuries.[1] The cuboid can be forced into closed compact postion[5] when there is forceful plantarflexion, inversion, and adduction occurring. This occurs from the contraction of the peroneus long tendon.[30] This action causes a rotational force[6] which subluxates the cuboid to a plantar or dorsal position.[29] This also results in the subtalar joint being prone to positional changes due to the force and contraction of this muscle.[28]

The most popular treatment method for Cuboid Syndrome is manipulation. Based on the literature, there are four main types of cuboid manipulation.

Cuboid Squeeze
While the patient is in a prone position[4], the ankle is plantar flexed to its maximum capacity.[1] The doctor places a double thumb contact on the cuboid bone while adding slight axial distraction. [29] The doctor then will press "squeeze" the bone in a dorsal to plantar lateral direction.[1]

Cuboid Whip
While the patient is prone, the patient's knee is flexed from a 70–90-degree position.[4] The doctor places both thumbs on the plantar aspect of the cuboid with other digits interlacing the dorsum of the foot.[7] The doctor then applies maximal plantar flexion while distracting the foot while

extending the lower leg simultaneously to achieve low amplitude and a high velocity.[28] This is done multiple times until the doctor feels the plantar muscles relax and full joint lockout. A plantar to dorsal thrust in the lateral direction is applied on full plantar flexion.[29]

Dorsal Subluxation Maneuver 1
The patient is in a supine position with the foot hanging off the table. The doctor contacts the 4th metatarsals dorsally while wrapping both thumbs on the plantar forefoot.[29] The doctor will then distract the joint with slight plantar flexion while the foot hangs off the table. This allows for the cuboid to move from the dorsal to plantar position with the help of weight and gravity.[5]

Dorsal Subluxation Maneuver 2
The patient is seated on the floor with the knee flexed to 90 degrees while holding their distal fibula and tibia.[29] The doctor distracts the fourth and 5th metatarsals while their superior hand applies a dorsal to plantar thrust.[5]

The number of treatments needed can be a reflection of the length of time an individual has suffered with this condition. Pain duration of 1 week correlated with one or two manipulations, pain and symptoms present for a month would suggest three to four manipulations over time.[31] During the manipulation, an audible pop or click may be heard during the procedure.[4] This audible is not a defining outcome that the bone has been successfully manipulated.[1] Utilizing changes in subjective and objective observations pre and post treatment is more rational and can lead to a better understanding of treatment and healing progression. Studies have reported that patients may have an immediate relief of pain and change of symptoms upon manipulation.[1,4] Manipulation of the cuboid should not be done if there is persistent swelling[5], ecchymosis[4], and damage to ligaments.[29]

Returning to sport or daily life activities may occur after manipulation if the patient is asymptomatic.[1] If pain is persisting, or additional support is needed, additional therapies have also been utilized as successful treatment options. Utilization of taping techniques and cuboid padding help to support the medial longitudinal arch[4] to prevent the cuboid from sub luxating due to the counterforce of the peroneus longus.[31] Poor foot biomechanics can play a role in pain management of cuboid syndrome. Utilizing a neutral orthotic can help prevent excessive foot and ankle pronation,[32] while initiating proper joint function. In cases where the pain results in life alterations such as difficulty with ambulation or other daily life events, immobilizing the foot and ankle should be suggested. Immobilization can be achieved through the use of a orthopedic boot with a potential for a crutch or cane.[4]

Passive physiological mobilization of the cuboid has been an essential treatment for cuboid syndrome recovery. This technique paired with manual stretching[32] and strengthening[5] helps improve range of motion in the ankle mortise joint while decreasing overall pain.[3] Utilizing

modalities that question the coordination and proprioception of the injured foot help lead to proper therapy. Wobble board exercises[29] and standing heel raising ball squeezes can help improve this notion.[33] Although there is no standard protocol for physical therapy interventions for cuboid syndrome, following the The National Athletic Trainers' Association (NATA) guidelines for athletic ankle sprains can be considered. Concentric and eccentric specific ankle exercises paired with ankle strengthening exercises are considered a universal protocol for rehabilitation.[34] Intensity and duration of rehabilitation is practitioner dependent.

Though conservative treatment options have shown positive outcomes, surgical procedures are considered an option of last resort.[5] There is no universal agreement between the length of time conservative care should be attempted before surgical intervention is needed. Lewson et al.[6] utilized manipulations, taping, custom orthotics, and physical therapy for 16 months before calcaneocuboid ligament reconstruction was decided. Although manipulation is the most popular treatment for CS, it is not always utilized. Of the studies that did not use manipulation as one of their conservative treatment options, the surgical decision ranged from five months[36] of failed conservative treatments to two years[35] of failed conservative treatments.

There is some evidence that supports chiropractic management in the treatment of cuboid syndrome. Kurman et. al used HVLA cuboid adjustments on toggle board with additional taping, and specific rehabilitation exercise to reduce lateral foot pain over an extended period of time.[37] Using HVLA talus and cuboid adjustments manually has also shown to increase mobility and stability in patient with chronic sprained ankles.[38] HVLA adjustments specific to the lower foot have also been shown to improve gait by reducing pain and increasing strength and flexibility.[39] There is little to no specific studies on chiropractic care and the treatment of cuboid syndrome. Rather, treatment of CS is grouped in with studies pertaining to chiropractic treatment and lateral ankle sprains.

Conclusion

In conclusion, this case report demonstrates a variety of AK and chiropractic therapies for treating cuboid syndrome. More research is needed with AK and chiropractic treatment options for cuboid syndrome treatments. More research should also be done one treating cuboid syndrome solely and not grouped in with general foot pain. More research should also be conducted utilizing one specific technique.

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Visceral Manipulation of the Kidney and Renal Ptosis

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Abstract

Introduction
Current diagnostic methods for renal ptosis rely heavily on palpation-based techniques, notably advocated by the Barral Institute. This study investigates the potential of manual muscle testing (MMT) as an alternative diagnostic approach for renal ptosis, aiming to assess its efficacy in identifying the need for visceral manipulation.

Methods
Records of 70 patients displaying an inhibited psoas muscle and a novel group muscle test were reviewed. The group muscle test involved specific foot and hip positions while resisting internal foot rotation. Therapy localization and direct kidney challenges were administered, followed by manual visceral manipulation techniques, during the period from January 3, 2024, to April 5, 2024.

Results
Therapy localization and direct challenges facilitated both the psoas and group muscle tests in all cases, with confirmation via palpation according to Barral Institute standards. Post-treatment, patients exhibited resolution of inhibited psoas muscles and negative therapy localizations.

Discussion
The absence of a rebound challenge supports the lack of direct muscular connections to the kidneys. Additionally, the broader utility of the group muscle test beyond renal ptosis diagnosis hints at its potential in visceral manipulation assessments.

Conclusion
MMT, combined with therapy localization and kidney challenges, presents a promising diagnostic method for renal ptosis. This study underscores the viscerosomatic connection between kidneys and the psoas muscle and advocates for further validation of MMT in visceral manipulation diagnosis.

Key Indexing Terms
Applied Kinesiology, Visceral Manipulation, Renal Ptosis, Manual Muscle Testing, Barral Institute, Musculoskeletal Assessment, Psoas Muscle, Abdominal Fascia, Viscerosomatic Reflex, Clinical Assessment, Case Series.

Introduction

Currently there are very few diagnostic methods for determining renal ptosis.[1,2] The Barral institutes teaches diagnosis of renal ptosis solely through palpation.[1,2] However, this case series has shown promising results for diagnosing renal ptosis through the use of manual muscle testing.

Renal ptosis is described by Dr. John Pierre Barral, DO, in his course: Visceral Manipulation: Abdomen 2, as when the position of the kidney that has shifted inferiorly or otherwise has become malpositioned.[1,2] The kidneys are held within the renal fascia, which is sandwiched between the psoas fascia, quadratus lumborum fascia, transversus abdominus muscle, the abdominal fascia and the peritoneum.[1,2,3] Because the kidneys do not have any direct structural attachments, many factors can cause the kidneys to change position.[1,2,3] This shift is usually due to falls, trauma, weight loss or other unknown factors.[1,2]

The viscerosomatic reflex between the psoas muscle and the kidneys has been established and used in applied kinesiology but there have been very limited studies investigating the effects of visceral manipulation of the kidneys.[4,5] This case series aims to investigate if manual muscle testing can be used as a reliable diagnostic criterion for the need of visceral manipulation of the kidneys.

Methods

This case series is based off of records of 70 patients between January 3, 2024 and April 5, 2024 that exhibited an inhibited psoas muscle and an inhibited novel group muscle test. The novel group muscle test is performed by the doctor opposing the patient's internal rotation of the foot while the patient has an internally rotated hip without any flexion, extension or abduction, an extended knee and a dorsiflexed foot.

In all the patients that met these criteria, both a therapy localization, a static challenge, sustained pressure through the abdomen and into the organ, and a direct challenge, a light thrust through the abdomen into the kidney, were administered to the organ.

The visceral manipulation was performed manually by the doctor with a two hand contact on the patient's abdomen and posterior inferior rib cage. The contact hand on the patient's abdomen provided a posterior and superior force while the posterior hand on the rib cage created an anterior force. There was also often a medial or lateral vector that was added in the coronal plane or rotational vector that was added through the axial plane. The direction of treatment was in all cases determined through a static challenge and/or direct challenge as well palpation.

Results

In all cases the therapy localization, static challenge and direct challenge resulted in facilitation of both the psoas and the novel group muscle test. The diagnosis was confirmed by the accepted methods of the palpation established by the Barral Institute.[4,5] After the treatment was performed, all of the patients no longer showed an inhibited psoas, an inhibited novel group muscle test, a

positive therapy localization over the area of the kidneys, a positive static challenge, nor a positive direct challenge.

Discussion

The presence of a direct challenge and absence of a rebound challenge is consistent with the modern understanding of the phenomenon of the rebound challenge. Since there are no muscular connections directly to the kidneys the kidneys would not be expected to move into the opposite direction of a force that was applied to it.

Although the novel group muscle test was useful in helping diagnose the need for visceral manipulation of the kidneys, this author has also found that this novel group muscle test can also be an indicator for other areas of visceral manipulation. These areas include the stomach, liver, lungs, large intestine, small intestine, heart, thyroid, mesentery and omentum. However, there are no studies that have been performed to confirm the use of this muscle test as a diagnostic tool for the need for visceral manipulation of these other organs. Therefore, it is this author's opinion that this group muscle test should be used in conjunction with other findings, such as palpation, laboratory exams, imaging studies and/or organ related muscles, to determine the need for visceral manipulation.

Conclusion

The diagnostic procedure of using the psoas muscle and the group muscle test, along with the kidney therapy localization and challenge, is promising as a more expedient way to diagnose renal ptosis or as a method for confirming the established palpation method.

This case series can help to confirm:

- Manual Muscle Testing can be a useful tool in diagnosing the need for visceral manipulation.
- There is a viscerosomatic connection between the kidneys and psoas muscle.
- An inhibited psoas muscle may be caused by a malpositioned kidney.
- The novel group muscle test can be effective in diagnosing the need for visceral manipulation.
- Static or direct challenges are the appropriate challenges to determine the vector of treatment to the kidneys.
- Visceral manipulation of the kidneys can be an effective treatment for restoring normal function to the psoas muscles.

More studies should be performed to confirm the findings of this case series and investigate other viscerosomatic reflexes that are present and improved with visceral manipulation.

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Informal Papers

Volume 1, 2024-2025

The Clinical Use of Dietary Fiber

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Abstract

Reducing inflammation is a crucial component in managing pain and preventing disease. Applied Kinesiology (AK) techniques facilitate the detection of intestinal dysbiosis, a primary cause of inflammation, and aid in differentiating among various types of dietary fiber as forms of remediation.

Keywords:
Dietary Fiber, Inflammation, Applied Kinesiology, Intestinal Dysbiosis, Probiotics, Short-Chain Fatty Acids (SCFAs), Cytokines, Manual Muscle Testing (MMT), Neurological Facilitation, Neurological Inhibition.

Discussion

A broad diversity of bacterial species in the gastrointestinal (GI) tract correlates with good health. [1] Dysbiosis is characterized by a reduction in microbial diversity, coupled with a rise in pro-inflammatory species. Factors contributing to dysbiosis include genetic predispositions, and a variety of environmental influences: unhealthy diet, antibiotic use, emotional stress, medications, etc.[2] In the United States, dysbiosis is widespread, largely due to an inadequate intake of fiber and dietary patterns centered around processed foods, saturated fats, and refined carbohydrates.

In the GI tract, inflammation is a natural response of the immune system, aimed at fighting pathogens and preserving homeostasis. Under normal circumstances, inflammatory responses terminate once pathogens have been neutralized. However, in cases of dysbiosis, harmful pathogens colonize and cause inflammation that persists unresolved. Classic symptoms of dysbiosis include altered bowel habits, bloating, abdominal discomfort, and the sensation of incomplete bowel movements. [3] In many instances, however, the symptoms are less obvious. Given the relationship between dendritic cells in the GI tract and neuroglia cells in the brain, inflammation in the gut often correlates with inflammation in the brain. From this perspective, the potential health problems rooted in dysbiosis are manifold.

Research indicates that probiotics can enhance the production of anti-inflammatory cytokines, [4] however, their efficacy is short-lived. Once probiotics are discontinued, the benefits are not sustained unless concurrent changes in diet and lifestyle are made. [5] Applied Kinesiology Manual Muscle Testing (MMT) demonstrates that probiotics begin to induce a weakening response within 10 days or less, despite an initial strengthening response (neurological facilitation).

When dosed properly, dietary fiber offers a viable alternative to probiotics as a way of reducing inflammation in the GI tract. Dietary fiber acts as a prebiotic, resisting breakdown in the upper GI tract until it reaches the colon. Once in the colon, fiber serves as a substrate for fermentation by beneficial bacteria such as Bifidobacteria and Lactobacilli. Through fermentation, short-chain fatty acids (SCFAs) such as acetate, propionate, and butyrate are generated. These SCFAs play a vital role in maintaining a healthy gut environment by providing energy, regulating pH, improving gut motility, enhancing intestinal barrier function, and reducing inflammation. [6]

Applied Kinesiology Protocol for Dysbiosis

Following a complete history and physical exam, the practitioner uses Manual Muscle Testing (MMT) in conjunction with magnet testing and composite vials to detect the presence of intestinal dysbiosis.

The procedure is as follows:

1. Perform Injury Recall Technique if indicated. [7]
2. Test the Tensor Fascia Lata (TFL) bilaterally. If the muscle tests “strong” (facilitated), check for autogenic inhibition. A failure to inhibit (over-facilitation) may indicate dysbiosis and should be monitored in follow-up visits.
   If the muscle tests “weak" (neurologically inhibited), check for autogenic facilitation. If the muscle does not strengthen (become neurologically facilitated), revisit step 1. If a "weak" (neurologically inhibited) muscle does strengthen, this may indicate dysbiosis and should be monitored in follow-up visits.
3. Locate a normal testing (neurologically facilitated) muscle, other than the Tensor Fascia Lata (TFL). This will be used for indicator testing.
4. Test microbial composite vials one at a time by placing them on the solar plexus and covering them with a 3000-5000 gauss magnet, south pole facing the subject. [8] Have the subject Therapy Localize (TL) the large intestine Chapman’s reflex, and retest the indicator muscle. A “weakening” response (neurological inhibition) suggests dysbiosis.
5. Test vials of SCFAs Butyrate and Propionate one at a time against the weakening microbe (both under magnet simultaneously) as the patient Therapy Localizes (TLs) the large intestine Chapman’s reflex. A strengthening response (neurological facilitation) indicates a deficiency in SCFA.
6. Test vials of anti-inflammatory cytokine IL-10 (or other anti-inflammatory cytokine) against weakening microbe (both vials placed under a magnet simultaneously) as the patient Therapy Localizes (TLs) the large intestine Chapman’s reflex. A strengthening response to the anti-inflammatory cytokine suggests a deficiency.
7. Test various types of fiber against the weakening microbe by having the subject chew the fiber and keeping it on their tongue. A strengthening response prompts prescription of that fiber.
8. Repeat this protocol in 2-3 weeks. Signs of improvement include facilitated bilateral TFL and a neutral response to IL10 and/or SCFA. If there are no observable changes, retest from step 2, but this time include the following: have the subject chew the fiber and keep it on their tongue while challenging for open Ileocecal Valve (ICV) and Valves of Houston (VOH) against strong indicator muscle. No response prompts an increase in fiber volume or frequency. Conversely, a weakening response suggests that the fiber

type, frequency, or volume is unsuitable. In this case, suspend the fiber for two weeks, then reintroduce it at reduced levels. Reevaluate in two weeks and make necessary adjustments.

Injury Recall Technique (IRT) is a technique developed by the late Dr. Walter Schmitt, designed to erase the neurological memory of past injuries. It is important to begin any Applied Kinesiology protocol with IRT, as omitting this step often leads to inaccurate findings. As an example, a weak A neurologically inhibited TFL is a common finding in dysbiosis because it is the muscle associated with the Large Intestine. However, a chronically weak TFL can also be an adaptation to a past injury. Past injuries can also skew cytokine testing. Acetate is excluded from the SCFA testing as a strengthening response may be due to factors unrelated to gut bacteria, such as a deficiency in vitamin B5, Iron, Niacinamide, Riboflavin, or Molybdenum.

Other anti-inflammatory cytokines besides Il-10 can be tested; however, IL-10, being produced by beneficial gut bacteria, appears to be most indicative of changes in gut flora.

It is important to test fiber orally as it might not respond when tested under a magnet. Similarly, patients are advised to chew the fiber when consuming them at home. Failure to do so can often result in minimal or no benefits. The appropriate fiber dosage varies by individual tolerance but starting with one teaspoon per day then gradually increasing to 1 heaping tablespoon usually yields observable results. It's best to consume fiber before meals, rather than after meals, to prevent bloating. It is advisable to limit each type of seed to about twice per week to avoid over-consumption. Follow-up testing will establish each person's optimal tolerance level.

Conclusion

Managing chronic inflammation necessitates addressing dysbiosis. If left unchecked, dysbiosis-induced inflammation can evolve into autoimmune diseases, metabolic disorders, and neurological conditions. Sources of highly concentrated fiber such as chia seeds or flaxseeds offer a potent solution for overcoming dysbiosis, mitigating inflammatory processes, and maintaining gut health. Applied Kinesiology is designed to monitor inflammation in real-time, provide precise remediation, and methodically track progress.

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