Palpatory Musculoskeletal Findings as Early Indicators of Visceral Disease

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Throughout the history of manipulative therapy, three major professions, osteopathy, chiropractic and physiotherapy, have incorporated their own significant variations of spinal manipulative therapy into practice. Currently, chiropractic literature lacks the evidence-based studies of the caliber that Burns, Cervero, Bonica, Beal and Korr have presented. Osteopaths, medical doctors and physical therapists have contributed greatly to the scientific validation of the role spinal manipulation plays in early detection, diagnosis and clinical management of visceral diseases.

Somatic Vertebral Dysfunction and SMT: Review of the Literature

This article provides a review of the literature surrounding the history of somatic vertebral dysfunction and spinal manipulative therapy. In the 250-year scientific literature review "Manipulative Therapy: A Historical Perspective From Ancient Times to the Modern Era," author and historian Dr. Elizabeth Lomax writes: "The physician could clinch the diagnosis by finding tenderness in the appropriate vertebra." And the use of palpatory musculoskeletal spinal exams as a tool for diagnosing disease was discussed by Avicenna, the "Father of Modern Medicine," in The Canon of Medicine.

In 1989, the strongest MD proponent of spinal manipulation, John Mennell, wrote "Understanding Manipulative Medicine in General Practice," published in the Journal of Manipulative and Physiological Therapeutics. In that article, Mennell states: "Then suddenly we find ourselves in practice where 80% of our patients complain to us of some sort of musculoskeletal pain ... 80% may sound high, yet remember that visceral and systemic diseases very frequently manifest themselves initially as musculoskeletal pain." Mennell concludes: "Joint dysfunction is not only a diagnosis but an early sign of visceral and systemic diseases."

In "A History of Manipulative Therapy," physiotherapist Erland Pettman states: "Manipulative therapy has experienced parallel development throughout many parts of the world. The earliest historical reference to
the practice of manipulative therapy in Europe dates back to 400 BCE. Over the centuries, manipulative interventions have fallen in and out of favor with the medical profession. Manipulative therapy was initially the mainstay of the two leading alternative health care systems, osteopathy and chiropractic, both founded in the latter part of the 19th century in response to shortcomings in allopathic medicine. With medical and osteopathic physicians initially instrumental in introducing manipulative therapy to the profession of physical therapy, physical therapists have since provided strong contributions to the field, solidifying their profession’s claim to have manipulative therapy within its legally regulated scope of practice.”

Beal5 states that his concept of viscero-somatic reflexes is based on a review of 143 articles that hypothesize the role of palpatory musculoskeletal findings as early indicators of visceral disease, as well as spinal manipulative therapy as the non-medicinal care of the reversal of those visceral diseases. He cites Burns and Korr, who wrote milestone articles in the Journal of the American Osteopathic Association,6-7 to support the viscero-somatic reflex Beal hypothesizes.

Beal’s review and supporting documentation include both the basic and clinical sciences. He describes both the somatic manifestations of visceral disease and their vertebra-by-vertebra, organ-by-organ autonomic segmental reference sites. Beal emphatically argues in favor of palpatory vertebral subluxations consistent with diagnosis of a viscero-somatic reflex, as well as their predictive value in pinpointing symptoms of visceral disease. In addition, he documents numerous studies on the principles and results of spinal manipulation as a treatment for visceral disease, and also presents findings from his review of the effects of surgery on viscero-somatic diseases.

The Chiropractic Challenge

My conclusion about the evidence-based scientific validation of motion palpation and manual adjusting is along the same line of thinking as Najm’s “Content Validity of Manual Spinal Palpatory Exams - A Systematic Review.” Despite the use of manual spinal palpation by chiropractors, very few studies have investigated their ability to measure the accuracy of spinal palpation as an objective tool to detect the link between subluxation and visceral disease, much less document that the chiropractic adjustment has reversed a visceral disease.

Many authors have presented proposals for a randomized clinical trial and what they intend to measure (content validity). Given the high frequency of spinal pathology and the use of these diagnostic methods to investigate them, well-designed studies are needed. For the practice of evidence-based medicine, it is
important to assess the efficacy and effectiveness of procedures customarily used in clinical practice. To this end, established benchmarks for the validity and reliability of procedures are essential.

While earlier reviews were not comprehensive systematic reviews, recent master’s theses and doctoral dissertations by Tuchin, Rampersad and Hoogendorn\(^9\)\(^-\)\(^1\) have attempted to highlight what would have previously been considered serious gaps in the knowledge about the accuracy of spinal palpatory procedures. Instrument adjusting offers an excellent solution to those problems by providing practitioners of spinal manipulation the ability to measure joint stiffness, as well as to apply measured and specific force. Colloca’s animal studies, for example,\(^1\)\(^2\) have implications for human RCTs, literature reviews and collaborative research, and the development of evidence-based clinical practice and policy.

**More Research Needed**

From the research perspective, chiropractic researchers need to focus more on the definition of the study questions, methods and measures, implementation procedures, and reporting, as are addressed in the dissertations and theses by Tuchin, Rampersad and Hoogendorn. These dissertations now identify previously absent reference standards, and instrument adjusting can add objectivity both in the detection of stiffness and the correction, compared to their absence with manual adjusting.

Colloca’s animal study finally offers some richness, rather than the poor sensitivity of the range of motion normally presented in the literature. From the clinical perspective, Colloca’s findings add objectivity to what in the past was based only on motion palpation, except for the studies by Fuhr on the Activator instrument. The author suggests development of algorithms and protocols as well as diagnostic tests in the evaluation of spinal dysfunction.

From a policy perspective, the chiropractic as well as medical manual medicine institutions need to enact continuing medical education and research guidelines to address the efficacy of spinal palpatory versus instrument joint stiffness measurement and instrument adjusting procedures. There needs to be a dialogue among the research departments at chiropractic colleges about developing onsite instrument-adjusting clinics. This will move the chiropractic profession from non-evidence-based palpatory findings and manual adjusting to objective instrument adjusting. This provides objective data for both the presence of the problems chiropractors claim they determine with palpation, as well as the removal of symptoms they claim have been removed due to manual adjusting.
It is time for the chiropractic profession to move into evidence-based care and utilize objective facts, not anecdotal subjective findings. It is time to position the profession to be accepted by and integrated in mainstream medicine.

References


Other Resources

- Edmunds B. "Lower Respiratory Tract Disorders and Thoracic Spine Pain and Dysfunction in Subjects
Dr. Tariq Faridi holds a doctorate in biomedical sciences and has completed two postgraduate CME courses from Harvard Medical School, accumulating 42 CE units for "Treating Obesity--A Multidisciplinary Approach," and "Malnutrition in the Hospitalized Patient." In addition, he has received a certificate for "Preventive Medical Strategies" from USC Medical School. Dr. Faridi is the author of Spinal Manipulation and Visceral Disease: Early Detection and Clinical Management and speaks at chiropractic colleges worldwide.