

Neurodynamics of vertebrogenic somatosensory activation and Autonomic Reflexes - a review:

Part 6 International medical literature and its clinical application of the somatovisceral model

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Abstract: A compilation of over 150 medical papers is presented in order to represent the recognition of spinal manipulation and the clinical involvement for the potential of vertebrogenic pathophysiology as reported by international allopaths. (Appendix A)

Indexing terms: Vertebral subluxation; Neurophysiology; Somatosensory; Autonomic nervous system; Somatovisceral model

Introduction

Medical authors from Continental Europe and the Asian regions appear to have accepted vertebrogenic concepts in the management of a range of visceral disorders as shown by the appendix. This list appears to be in contrast to general positions which predominate in English speaking sections of the profession.

While there are a few individual exceptions, the English speaking detractors generally seem to be critical of the basic somatovisceral pathophysiology concepts involving somatosensory vertebrogenic reflex activation. (1, 2, 3, 4) This limited interest is also reflected in the dearth of English language medical research papers and clinical application on this topic. It is suggested that this opposition may be more political or territorial than clinical or scientific. This dichotomy in allopathy appears as a scientific paradox.

While evaluations have been conducted on similar chiropractic material, (5, 6, 7) critical reviews of the medical papers presented here could not be located. In a further contrast, somatovisceral concepts involving acupuncture (8) or other means (9, 10) seem to be more readily accepted medically than that of noxious somatosensory autonomic reflexes of vertebral origin upon visceral function.

In an apparent contradiction, Ernst (A), Seidl and Todt concluded that '*Manual medicine should be an integral part of modern clinical otolaryngology*'. (11) This is in contrast to the opinion of Ernst (E) who appears to regularly oppose such concepts. (1, 12) However Myhrvold concludes

...the medical literature of Europe and Asia is open and positive with its reporting of somato-visceral relationships. This review lists over 150 peer-reviewed, indexed papers relevant to chiropractic concepts.



that *'Most acute low back pain syndromes should be assessed by the chiropractor in order to prevent chronic illness.'* (13)

It is noted that many medical journals publish case reports. In addition, Biomed Central (BMC, Elsevier) publish a medical journal specifically on case reports. This journal emphasises publication of cases that provide unexpected or new observations. (14) If case reports did not provide edification or contribute to the evidence base, it is suggested there would be no reason for journals to publish them, or for clinical trials to be established..

As different levels of evidence exist for different reasons, there must be sound reasons for the contribution made by case reports. This may include:-

- To advance patient outcomes and safety
- They can disclose unforeseen clinical findings and outcomes
- They disseminate information of clinical observations
- They can originate both negative and positive observations
- They provide a basis for case series
- They provide a basis for comparative studies
- They are the first notification of clinical impact
- They can be the foundation for a body of evidence
- They may lead to justifying other hierarchical levels of research
- To ignore the positive contribution of case reports may disadvantage patients, and
- To ignore negative case reports may also disadvantage patients by exposing them to less-than-appropriate care.

Discussion

Most of the case reports presented in the attached Appendix A represent anecdotal evidence. A review has previously questioned the trend to overlook or dismiss the importance of anecdotal evidence. (15)

Mounting clinical observations can provide the basis for breakthroughs, but to ignore anecdotal findings is ultimately a suppression of data. The accumulation of case reports provides not only the rationale, but the data to justify further research to confirm or deny an observation in order to develop or modify such an observation. Without such data there would be no incentive or justification for higher level studies on such topics. Positive anecdotes should not be dismissed before they are more fully evaluated. As noted by Wolfinger *'The plural of anecdote is data'*. (16)

Charlton also acknowledged the significance of such reported observations when he stated that *'Anecdotal observations alone cannot be taken to show cause and effect, but they may provide stimuli for potentially important research.'* (17)

Further support for recognising anecdotal evidence is provided by Limb who succinctly summarised the often dismissed importance of subjective evidence.

'It is almost impossible to ignore one's own experience. In other words, the personal experiences we have as providers - anecdotal evidence if it were to be evaluated - typically do affect how we make decisions. Some of the wisest, most experienced practitioners in the world today are valued precisely because of the wealth of anecdotal evidence that they possess, and for a patient, it is more comforting to have an experienced, confident health care provider who has "seen it all,"..... Thus, it is important to acknowledge that we live anecdotal lives, personally, professionally, and even scientifically.' (18)

In support of this form of evidence, Campo put forward the opinion that *'Whether we choose to admit it or not, the anecdote continues to be an important engine of novel ideas in medicine.'* This opinion appears to be endorsed by Schöps et al, who stated that *'Chiropractic techniques are of particular importance for the examination of the cervical spine.'* (19, 20)

An assessment of the vertebrogenic somatovisceral concept is also found in Schmorl and Junghanns' chapter titled *'Pathophysiology and clinical aspects of motor segments – E: Inefficient motor segment (Intervertebral Insufficiency).'* This extensive reference list in the tome *'The Human Spine in Health and Disease'* is too extensive to include here. Although many citations may require translation, this highly respected volume is strongly recommended reading. (21)

An earlier text by four orthopaedic surgeons indicates further visceral disturbances associated with somatic alterations. (22) However, this covered more the pathomechanical structural or postural assessment on the effects of visceral disorders rather than neurological somatosensory ones.

In discussing pulmonary aspects of thoracic pain, Meier-Sydow stated that *'The origin may be somatic or visceral.'* (23) If somatic, this makes a definitive differential diagnosis critical in order to avoid extensive and expensive diagnostic tests and possible unnecessary surgical intervention.

Conclusion

This review suggests that the papers presented in the Appendix A provide sufficient evidence to justify ongoing research and clinical evaluation. This does not appear to have taken place in some allopathic circles.

These observational based reports on the numerous citations in Appendix A suggests case reports provide evidential studies that must contribute in a pragmatic way to scientific discovery, the application of scientific theories, and clinical efficacy. Empiricism deserves greater deference in the hierarchy of the evidence pyramid. (24)



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Appendix A

Medical papers based on vertebrogenic factors in non-musculoskeletal conditions

The following 150 or so papers on medical manipulation relate to the management of neurospinal-somatovisceral disorders. These comprise mostly extracts from Pubmed. This appendix primarily consists of European papers with virtually none from English language journals. Many translations are from the Google translation facility. Abstracts were not available on all papers, so the title only is listed.

Categories

Cardiovascular	Immune System	Respiratory
Dental	Neurological -	Somatovisceral
Diagnosis	- Dysphonia	Thyroid
ENT	- Headache	Vascular
Gastrointestinal	- Vertigo	Viscerosomatic
General	Paediatric	Vision.
Gynaecological	Psychological	

Cardiovascular

Bechgaard P, Fossgreen J. [The thoracic segmental pain syndrome with special regards to pseudo-cardiac disorders.] MMW Munch Med Wochenschr. 1980;122(20):759-760. (German)

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General

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