

## **Chiropractic Care and Visceral Disorders: What Is the Neurological Link?**

By David Seaman, DC, MS, DABCN

In the July/August, 1995 issue of JMPT was published Drs. Nansel and Szlajak's paper, "Somatic dysfunction and the phenomenon of visceral disease simulation: A probable explanation for the apparent effectiveness of somatic therapy in patients presumed to be suffering from true visceral disease."<sup>9</sup> During the past year, I have asked numerous chiropractors (probably around 1,000 or more) if they have heard of this paper. I would estimate that maybe five percent of the DCs have read or heard of the paper.

As far as I know, this paper has received very little, if any, attention from the various trade journals and papers. This is surprising to me because the title of the article suggests that subluxations can promote symptoms that only mimic visceral disease. According to the authors, it is unlikely that subluxations promote true visceral disease.

I should first say that I agree with Nansel and Szlajak. I expected Barge, et al., or Rondberg, et al. to attack this paper and sling the usual anti-chiropractic rhetoric. However, the only commentary about this article that I am aware of is that of David Chapman-Smith,<sup>1</sup> who has been demonized in Rondberg's paper. This reminds me of paradox, the likes of which Rod Serling described for many years.

In actual fact, Chapman-Smith went out of his way to support the theory that subluxations cause true visceral disease. He states that Nansel and Szlajak, "cast severe doubt upon, while ruling out, the possibility of somatic dysfunction as a cause of true internal organ disease"; that they "are wrong to cast such severe doubt." As far as I can tell, Chapman-Smith and those who take his viewpoint have missed the essence of the Nansel and Szlajak paper.

Before starting, I would like to say that I like The Chiropractic Report and recommend that all DCs become subscribers. At the same time, I feel compelled to write this article because many DCs already subscribe and might be lead to believe the inaccuracies discussed in this particular issue.

### **Purpose of the Nansel and Szlazak Paper?**

In the Background and Objective sections of the abstract, we are told that many theories have been put forth to explain the quick and dramatic disappearance of a variety of symptoms related to visceral disease. They state: "The purpose of this review is to examine the scientific bases upon which these sorts of clinical phenomenon might be interpreted." What phenomenon are they referring to? They are referring to the presumed symptoms of visceral disease that can respond quickly and dramatically to chiropractic care.

When I first read their paper, I assumed, because of what was stated in the Background and Objective sections, that they were referring to situations involving a patient whose headache, dizziness, and nausea disappeared after an adjustment or two. I have met only a few DCs who have not seen such a dramatic response. However, I have never met a DC who told me that severe atherosclerosis (or any other morbid condition) disappeared after a week of chiropractic care to the amazement of the cardiologist or attending physician.

Every interested DC should read the Nansel and Szlazak paper. All will see that the authors spend most of their time explaining why it is unlikely that segmental subluxations/joint dysfunction will cause diseases in organs innervated by the same segmental level. Instead, they provide an impressive body of research which suggests that the visceral symptoms caused by subluxations develop because nociceptive input can ultimately stimulate autonomic centers in the brainstem, which can subsequently generate a wide variety of symptoms. Read the paper for the details of their explanation. It is more involved than what I have written here.

### **Errors in Chapman-Smith's Defense**

Clearly, the purpose of the Nansel and Szlazak paper was not to discuss how chiropractic care might help to resolve certain types of acute and chronic diseases that have been verified by some type of diagnostic test, i.e., laboratory or imaging. It was also not their intent to discuss how visceral diseases might induce subluxations. It was their intent to discuss how "the vertebral column is causing symptoms that are mistaken for visceral disease." Where did I get this quote? It came from *Manipulative Therapy in Rehabilitation of the Locomotor System* by Dr. Karel Lewit.<sup>6</sup> In this section in Lewit's text about vertebrovisceral correlations, he states that the following possibilities exist:

1. The vertebral column is causing symptoms that are mistaken for visceral disease. (Here we are told that subluxations can mimic or simulate visceral disease, just like Nansel and Szlazak have described.)
2. Visceral disturbance is causing symptoms simulating affection of some part of the locomotor system.
3. Visceral disease is causing a reflex (pseudoradicular) reaction in the segment, including blockage (i.e., fixation/restriction) in the corresponding mobile segment of the vertebral column.
4. Visceral disease that has caused a segmental movement restriction has subsided, but blockage remains, causing symptoms simulating visceral disease [as in (1)].
5. (Conjectural.) Disturbance of the locomotor segment is causing visceral disease.

Notice how Lewit agrees with Nansel and Szlazak, without reservation: that subluxation can simulate visceral disease. He also makes it clear that the notion that subluxation causes visceral disease is conjectural. Clearly, Lewit agrees with Nansel and Szlazak. Oddly enough, Chapman-Smith believes that Lewit supports the view that subluxations cause visceral disease. Chapman-Smith states: "Lewit, the prominent neurologist and manual medicine specialist, provides detailed support for this view in his leading text." I went to the pages Chapman-Smith cited and found the five vertebrovisceral correlations which are listed above. Very simply, Lewit does not support the contentions of Chapman-Smith.

Let's examine one of Chapman-Smith's efforts to support the notion that subluxations cause true visceral disease. He cites a paper by Mannheimer, et al. who examined the effects of spinal cord stimulation in cases of angina pectoris which were induced by a pacing catheter.<sup>7</sup> The subjects included 20 patients, 15 of whom had three vessel disease and two of whom had two vessel disease. In other words the patients involved had serious atherosclerosis.

Angina is typically induced by emotional states such as anxiety, anger, frustration and excitement,<sup>2</sup> or in this case, a pacing catheter. The physiological response is most likely an enhancement of sympathetic tone which results in vasoconstriction. The classic medical treatment for angina involves the use of nitroglycerin. Nitroglycerin is known to reduce vascular tone. In recent years a proposed mechanism of action for nitroglycerin has been put forth.

Before discussing the mechanism of action of nitroglycerin, it should be understood that local vasomotor control probably involves the nervous system and also local metabolites, such as potassium ions, lactic acid, carbon dioxide (Guyton) and endothelial derived relaxing factor (EDRF).<sup>8</sup> EDRF reduces vasomotor tone and enhances blood flow. By its name we can suspect that EDRF is found in endothelial cells, however it appears to be deficient in atherosclerotic vessels. It is now believed that nitroglycerin is converted into nitric oxide, which is another name for EDRF, and induces vasorelaxation.<sup>8</sup>

In the Mannheim study, the researchers used spinal cord stimulation to induce vasorelaxation and the reduction of angina symptoms. The authors state that the mechanism of action of spinal cord stimulation involves an anti-ischemic and a pain reducing effect. This is not any great revelation. It is known that mechanoreceptor axons can inhibit sympathetic and nociceptive activity at the level of the spinal cord.<sup>4,5</sup> This is also the likely mechanism by which the chiropractic adjustment can reduce sympathetic hyperactivity and pain.

If I were to suggest that nitroglycerin therapy reduces or eliminates ischemic heart disease, what would you say? You would probably say that nitroglycerin reduces symptoms in atherosclerotic vessels, but does not reduce atherosclerosis. Just the same, spinal cord stimulation and chiropractic care might be able to reduce anginal symptoms, but they do not reduce atherosclerosis. For some reason, Chapman-Smith discusses the Mannheim paper and then suggests that ischemic heart disease is reduced by somatic stimulation of the autonomic nervous system (he should have said somatic stimulation and the subsequent inhibition of the autonomic nervous system). His incorrect explanation would still be incorrect even if he properly described the relationship between somatic afferents and the autonomic nervous system. This is because there is no evidence to suggest that spinal cord stimulation, the chiropractic adjustment, and nitroglycerin do not eliminate atherosclerosis, which causes ischemic heart disease.

In closing, Nansel and Szlazak do not suggest that the book should be closed on the segmental theory of visceral disease, as suggested by Chapman-Smith. They state: "Given the preponderance of evidence to

date, we simply assert that we have been able to find no scientifically sound reason to believe it to be so, while at the same time being confronted by a plethora of compelling scientific reasons to believe it is not to be."

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