

## The vertebral subluxation syndrome: is a rose by another name less thorny?

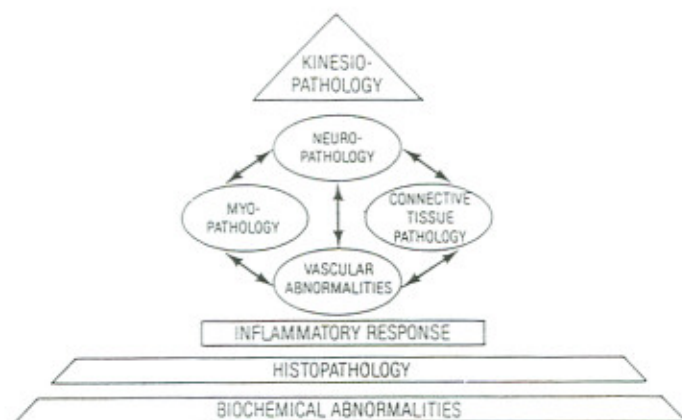
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The archetype of the lesion treated by chiropractors is the vertebral "subluxation". Defined by Palmer<sup>1</sup> in 1910 as a partial or incomplete separation, one in which the articulating surfaces remain in partial contact, the subluxation is undoubtedly one of the most controversial terms both within, as well as outside, the chiropractic profession.

In the past 15 years, in an attempt to better understand the primary underlying condition treated by chiropractors and without abandoning the premise upon which chiropractic was founded, the vertebral subluxation complex paradigm was formulated. Based on the work of Homewood<sup>2</sup> and Janse,<sup>3</sup> Faye<sup>4</sup> began teaching this model at the Canadian Memorial Chiropractic College (CMCC) in the mid 1970s. He further refined and popularized the vertebral subluxation complex paradigm through the Motion Palpation Institute.<sup>5</sup>

Other authors have made revisions to Faye's early model<sup>6,7,8</sup> with Lantz,<sup>9</sup> offering a hierarchy of components, the foremost component being that of kinesio-pathology. (Table 1).

**Table 1**  
**Hierarchy of Components**  
**of the Vertebral Subluxation Complex (after Lantz<sup>9</sup>)**



Kinesio-pathology of the spine is characterized by hypomobility, hypermobility and aberrant motion in which there is an alteration of joint movement. The primary chirotherapeutic procedure is directed at normalization of joint movement through the use of the adjustment and related therapies. The basic philosophy of chiropractic health care is that the chiro-

practic adjustment directed to the musculoskeletal system can further the restoration and enhancement of the health of the patient by altering the neural regulation of body systems.

Lantz's work acknowledges that the primary characteristic of the vertebral subluxation complex is abnormal joint motion. Recognizing that the somatic dysfunction that responds to spinal manipulation of mechanical disorders of the spine is complex,<sup>8</sup> has allowed us to define the various components of this model. Traditionally, the chiropractic profession has purported that the vertebral subluxation complex encompasses much more than kinesio-pathology in terms of the signs and symptoms that are empirically observed and treated successfully in many cases.

Building on the subluxation complex paradigm, I urge revision of this model to conform more to standard health care terminology, allowing the vertebral subluxation complex to further evolve to the term vertebral subluxation syndrome.

Toward this end, let us first define the term vertebral subluxation syndrome so that we can better appraise the various components of the model. Vertebral pertains to one of the segments of the spine as we use it to describe the functional segments of the spine, the vertebral motion segments.<sup>8</sup>

Subluxation has recently been defined by a nominal consensus panel at CMCC as: "An incomplete luxation or dislocation in which alignment, movement integrity, and physiological function are altered although contact between joint surfaces remains."

**Table 2**  
**Criteria Used to Diagnose Fibromyalgia (after Smythe<sup>12</sup>)**

Obligatory criteria that must be present include:

- Subjective aching of more than three months duration;
- Subjective stiffness of more than three months duration;
- Point tenderness at multiple sites.

Some, but not all, minor criteria must also be present.

These include:

- Chronic fatigue;
- Sleep disorder;
- Change in symptoms with anxiety/stress;
- Change in symptoms with activity;
- Change in symptoms with weather changes;
- Headaches;
- Irritable bowel syndrome;
- Subjective swelling;
- Nonradicular, nondermatome numbness;
- Dermographia.

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While the term 'complex' is used to describe the sum or combination of various things like or unlike as a complex of symptoms,<sup>10</sup> complex has more traditionally been applied to psychological syndromes; for example, Oedipus complex. Stedman's Medical Dictionary<sup>11</sup> defines complex as an organized constellation of feelings, thoughts, perceptions and memories which may be, in part, unconscious and may strongly influence associations and attitudes.

On the other hand, syndrome originates from the Greek word meaning "running together or tumultuous course". It is defined by Stedman's<sup>11</sup> as "the aggregate of signs and symptoms associated with any morbid process and constituting together the picture of disease". The term syndrome, therefore, would seem more applicable.

Thus, we have an aggregate of signs and symptoms associated with abnormal vertebral joint motion in which the relationship of the joint surfaces is altered while remaining in partial contact. This encompasses hypomobility, hypermobility, and aberrant motions which are characterized by a change in the axis of rotation and altered motion while the joint surfaces remain in partial contact.

**The syndrome model**

Use of the syndrome model to describe the aggregate of signs and symptoms associated with vertebral subluxation follows the precedent established by the equally controversial fibrositis/fibromyalgia disorder.

We have recently witnessed the condition fibrositis, de-

**Table 3**  
**Reported Diagnostic Features of the Primary Fibromyalgia Syndrome**

Feature	Smythe <sup>12</sup>	Kraft <sup>14</sup>	Sheon <sup>15</sup>	Moldofsky <sup>16</sup>	Wolfe <sup>17</sup>	Yunus <sup>18</sup>
Widespread aching (3 month)	X		X	X	X	X
Tender points (no.)	X (12/14)	X	X	X	X (7+)	X (5+)
Skin roll tenderness	X					
Disturbed sleep	X			X		X
Normal x-ray and laboratory findings	X		X	X	X	X
"Type A" personality	X		X			
Relief with heat			X			
Dermatographia		X		X		X
Emotional distress				X		X
Effects of weather				X		X
No trauma or rheumatic disease						X
Relief with physical activity						X
Irritable bowel syndrome						X

**Table 4**  
**Reported Diagnostic Features of the Vertebral Subluxation Syndrome**

Feature	Palmer <sup>1</sup>	Homewood <sup>2</sup>	Janse <sup>3</sup>	Sandoz <sup>19,20</sup>	Faye <sup>21</sup>	Haldeman <sup>22</sup>
Altered alignment	X	X	X	X		X
Aberrant motion	X	X	X	X	X	X
Palpable changes	X	X	X	X	X	X
Localized/referred pain	X	X	X	X	X	X
Altered physiological function	X	X	X	X	X	X
Reversible with adjustment/ manipulation	X	X	X	X	X	X
Focal tenderness	X	X	X	X	X	X

scribed in the medical literature for over a century, relabelled as fibromyalgia syndrome.<sup>12</sup> A condition that has long been designated psychogenic at best with the physiological manifestations either denied or ignored, is now being clinically diagnosed using the recently established designation and criteria in Table 2. The multiple complexities and varied systemic complaints of this condition are now receiving the objective investigation that has long been overdue. While there has not been universal consensus regarding the use of the term fibromyalgia,<sup>13</sup> it has become a diagnostic entity that unifies separate diagnoses under one conceptual framework<sup>12</sup> (Table 3).

Using the fibromyalgia syndrome as a model, criteria for the vertebral subluxation syndrome can then be established. The 'Obligatory Criteria' organized according to the hierarchy of Lantz<sup>9</sup> is altered joint motion, or the kinesiopathology of the vertebral motion segment. Other criteria that result from joint dysfunction can then be identified from the other categories, including neuropathology, myopathology, connective tissue pathology, as well as vascular abnormalities. Common to all tissues is the inflammatory response, histopathological response and biochemical abnormalities. These other features of the subluxation thus become helpful in characterizing the disorder.

Adoption of the vertebral subluxation syndrome as the paradigm for the complex condition treated by the chiropractic adjustment can become a unifying concept. Further investigation into the diagnostic features of the vertebral subluxation syndrome will generate more acceptance of the model, as have those that have studied the features of fibromyalgia (Table 3).

The central issue for chiropractors today should not remain the terminology used to describe the vertebral subluxation syndrome, but rather the specific mechanisms of how this complex aggregate of signs and symptoms is produced by altered spinal joint movement.

In doing this, it is hoped that chiropractic can avoid the difficulty experienced by other disciplines in recognizing the etiology of features which may be expressed as clinical manifestations of the vertebral subluxation syndrome, such as: low back pain, headaches, referred pain, chest pain, paresthesia, as well as limited motion.

Identification of conditions resulting from vertebral subluxation then become the criteria for diagnostic indexing. Examples might include vertebral subluxation syndrome: headache; or vertebral subluxation: low back pain. The ultimate goal is direction of the patient to appropriate therapy following identification of the vertebral subluxation syndrome.

Using a matrix similar to the reported diagnostic features of the primary fibromyalgia syndrome, (Table 3) the reported diagnostic features of the vertebral subluxation syndrome (Table 4) can form the basis of an objective testing ultimately leading to consensus on the criteria used to diagnose this clinical entity.

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