TERMINOLOGY RELATING TO THE VERTEBRAL SUBLUXATION COMPLEX AND THE MANIPULATIVE SCIENCES. PART I

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ABSTRACT

INTRODUCTION: This discussion seeks to highlight the many terms that have been used in the literature and other sources relating to elements of a Vertebral Subluxation Complex (VSC) and the manual healing sciences, particularly chiropractic.

BACKGROUND: The term VSC is considered here as the most appropriate of the designations in general use, as it encompasses other identified components, not just a vertebral subluxation (displacement). However, despite alluding to this apparent and common clinical entity, no single term has been unanimously adopted to represent the VSC.

METHOD: The variety and frequency of terms and expressions identifying with a vertebral subluxation and spinal manipulation, became apparent while reading research papers for other purposes. As appended, tables have been devised to categorise key components of the VSC.

REVIEW: Papers from all the health professions which encompass spinal manipulation to varying degrees, are cited. These include chiropractic, osteopathy, medicine and physiotherapy references. All have developed a variety of terms identifying this physical biological entity, and for the procedure used to address it. Authors have devised this wide variety of terms to designate essentially the same clinical finding of a subluxation, or elements of it. Unanimous acceptance of the VSC premise still seems somewhat limited.

DISCUSSION. It is astounding to find over 500 terms relating to aspects of the same clinical entity. One would be challenged to find any other entity that attracts even just 10% of that number of similes - especially a biological one. Many authors from the range of professions seem to have staked a claim in naming this clinical finding, yet universal recognition and acceptance of a single term seems to be slow to materialise. Despite such a proliferation of terms in the literature referring to this clinical finding, one would expect it to be more readily recognised and incorporated into standard textbooks.

CONCLUSION. To attract so many terms for the same entity should emphasise its importance in health care. However, it is perplexing in that so many terms tend to dilute the significance of such a common and clinically important finding. (Chiropr J Australia 2017;45:73-89)

Key Indexing Terms: Chiropractic; Subluxation; History of Medicine

INTRODUCTON

Some 296 synonyms metaphors and euphemisms involving the term that chiropractors nominate as comprising a vertebral subluxation complex (VSC), have been previously reported in the literature. (1,2) Additional terms have now been revealed in the literature, primarily by chiropractors and others who purport to offer spinal manipulation as a health service.

Multiple terms have also evolved for the *procedures* used by manipulators who clinically address the VSC. These procedures have been identified, for over 100 years, by chiropractors as a spinal or vertebral adjustment. (3) It is differentiated from the more general term manipulation and mobilisation as being a refined and specific form of that clinical procedure.

Although other anatomical articulations may undergo subluxation (4), this discussion will focus more on vertebral subluxations as the more complex articular lesions addressed by chiropractors since they are considered so influential upon physiology, especially neurophysiology. (1,5-7)

An earlier paper catalogued almost 300 terms. This list has now grown by some 200 more. (2) The observed or discussed phenomena are presented here by being categorised into various headings of key elements that comprise a vertebral subluxation complex. (8,9)

While such a preponderance of figurative terms is not necessarily significant from a strictly scientific basis, it must carry some weight to at least signify the frequent existence of a definitive clinical finding. Such a proliferation of terminology should not be ignored. The demand by patients to address signs and symptoms associated with these lesions would also suggest that they are of some clinical significance. It may be that the term *subluxation* and *vertebral subluxation complex* comprise but 1 aspect of the chiropractic model of health care; albeit 1 that differentiates chiropractic from other healing arts and sciences.

Many of the terms in the attached appendices have been derived from medically authored papers in medical journals – these are denoted in Italics. They comprise some 31.4% of this total list of terms relating to the VSC identified here.

The many expressions listed, essentially relate to the same spinal lesion, while some refer to particular elements within the complex. The name Vertebral Subluxation Complex has been adopted. However a sound case has been made for the term Vertebral Subluxation *Syndrome* (VSS) as the more appropriate clinical term for this lesion. Gatterman suggested that this would encompass the gamut of considerations within such a multifaceted clinical presentation. She differentiates this Vertebral Subluxation Syndrome as "*…an aggregate of (clinical) signs and symptoms associated with an abnormal vertebral joint motion in which the relationship of the joint surfaces is altered while remaining in partial contact."* (10)

METHOD

Fundamental to this discussion is the concept that a VSC comprises several elements. Joint disturbance cannot take place without disruption of other elements. These may comprise quite subtle changes. Some can be seen radiographically on functional views or with other clinical signs and symptoms. Such findings increase the importance of recognising the physical elements of the VSC and perhaps are why so many similes and metaphors have arisen.

I did not specifically search for the various terms presented. They did however become apparent while researching numerous papers and other sources on spine-related topics. Some of the cited terms have been sourced from less formal published formats, demonstrating a more casual recognition of the VSC.

Over 670 subluxation-related terms are categorised here and presented under specific headings. These comprise:

A. General Classification

This section covers the broader terms used for the VSC as cited in the literature. Generally, segmental dysfunction and or displacement of VSCs may be detectable through motion and static palpation of the spine, and often confirmed through radiological examination. (See Part II, Appendix 1)

As dysfunction is a key element of a VSC, it may not always be possible to demonstrate a VSC radiographically. It needs to be correlated with other clinical findings in each case.

Further physical examination as well as patient history, together with noting of associated signs and symptoms which can include localised swelling or inflammation, can indicate the lesion. Patient awareness of apparent discomfort or pain would be recorded as well. (11)

B. Articular Pathophysiology/Pathomechanics/Articular Dysfunction

In the examples presented, the following 4 sub-categories are designated. Normal articulations may be considered as being mobile, flexible and supple, moving freely and physiologically within their normally limited range of motion.

Joint physiology refers to normal joint function. (12) It follows that abnormal joint mechanics, movements or states are functional changes, such that pathophysiology of an articulation may be noted as the biological and physical manifestations of an abnormal joint movement – a disturbance or dysfunction. (See Part II, Appendix 2)

a) Aberrant movement
   Jerky movement of an articulation, especially larger joints such as the knee, may manifest themselves in lacking a smooth even range of movement. (See Part II, Appendix 2)
b) Articular Fixation
   Fixation of a joint can be subtle but usually detectable through comparative static and motion palpation as a loss of joint motion. Fixation or restricted motion may

occur anywhere in an articulation's normal range of motion, even in its normal, neutral position. (13). (See Part II, - Appendix 3.)

c) Articular Hypomobility
This is somewhat akin to a fixation and is noted as reduced motion. As with a fixation, joint hypomobility can often be detected through comparison with adjacent or corresponding articulations. (See Part II, Appendix 4)

d) Articular Hypermobility
There can be degrees of hypermobility although severely unstable joints can be quite apparent. They do however raise at least an "orange flag" of awareness and caution and therefore require careful assessment. Recognised precautions may be necessary in preparation for and in conducting a spinal radiological procedure. – (See Part II, Appendix 5)

C. Osseous Displacement

While bones can be designated as partial dislocation or subluxated, such a state can only be maintained as a part of the overall complex. For a bone to be displaced it would have to be fixated, otherwise it would tend to resume its neutral position and function. The author is not aware of criteria which specifically differentiates a subluxation from a luxation. (See Part II, Appendix 6)

D. Pathomyological

There is usually a myological component with a VSC - often in the form of a hypertonic muscle. In the spine, this often involves the intrinsic muscles, and of course in acute conditions, general muscle spasm can be present - identified as muscular splinting. (11) (See Part II, Appendix 7)

E. Pathoneurophysiological

Disturbance of the normal segmental physiological neural state may be pathognomonic of a VSC. It can be apparent in a variety of forms from radicular pain, headaches and paresthesias, but also even in more subtle changes due to noxious sensory input. It has been thought to compromise the autonomic nerves through the involved vertebral level and subsequently the function of the associated innervated structure or organs. (6,14-22) (See Part II, Appendix 8)

F. Signs and Symptoms, Vascular, and Biochemical

The signs and symptoms commonly associated with a VSC are simply too numerous to mention. However some of the more general terms have been listed here as well as the vascular and biochemical clinical findings that have been recognised. Neither Appendix 9 (Signs and Symptoms) nor Appendix 10 (Vascular/Biochemical) claim to be comprehensive. (See Part II, Appendices 9 and 10)

REVIEW

While listing over 100 terms herself, Gatterman acknowledged the proliferation of terms for the VSC in 2005. In an insightful observation she pondered the possibility of 500 such terms ("Do I hear 500?"). Her vision appears to have been realised. (1)

In 1968, Watkins noted the earliest association of the more biomechanical components of a vertebral subluxation as being in the year 1746. In his thesis, the German physician Hieronymus noted that joints could undergo *"lessened motion"* with *"slight change in position*", and that most were subluxations rather than luxations. (13)

Terrett stated that in 1820 the medical doctor Harrison had also recognised the more complex association of neurological sequelae with vertebral subluxations. (23)

But it was Palmer in 1895 who identified the wider potential ramifications of an association with the nervous system. This laid the foundation for modern-day chiropractic, and arguably the development of spinal manipulation for all the manual health professions. (3)

Other early medical use of the term subluxation in a chiropractic sense was in 1918 when another medical doctor, Warbasse, stated, *"Subluxations of vertebrae occur in all parts of the spine and in all degrees. When the dislocation is so slight as not to effect the spinal cord, it will still produce disturbances in the spinal nerves, passing off through the spinal foramina…..Blasius, (1869) showed that slight dislocations occurred, which presented but slight symptoms."* (24)

By at least 1980, Gray's Anatomy mentioned the mechanical aspects of the subluxation of the sacroiliac joint where *"locking may occur in the position of rotation of the hip bones adopted during pregnancy. This so-called subluxation of the sacroiliac joint causes pain by the unusual tension which it imposes on the ligaments, and reduction by forcible manipulation may be attempted."* (25)

Such historical insights presented the medical profession with the opportunity to develop a natural model of health care, although it seems to have been usurped by a more pharmaceutical model.

Traditionally, the medical definition of a subluxation has been limited to an osseous displacement that was less than a dislocation. (4) No mention seems to have been made to include within that definition other structures, functions and associated pathophysiology which may be associated with such a condition. This would be somewhat akin to saying that a greenstick fracture only affects a bone without consideration of adjacent soft tissue, vascular and inflammatory response, the function of the affected structure, or the noxious neurological afferent input and subsequent neural efferent response. (8,9)

In their 2001 text, Keats and Anderson depict a *physiologic subluxation*. It could be argued, however, that if a subluxation is indeed physiologic then it should be quite a common and normal clinical finding. This has not been my experience. (26)

While a VSC comprises the anatomical and physiological findings, the VSS encompasses the signs and symptoms associated with the VSC. (10) Such terms imply a gamut of other considerations that may be involved. These carry a more accurate reflection of the disturbance. Significantly, the terms particularly include

associated neural structures and neural physiology and the possible dysfunction of structures innervated by the associated nerves.

It is important to stress the neural elements in a VSC lesion, as it is impossible to have a pure osseous 'subluxation' except in a skeleton. In other words it is more than a mechanical-physical articular displacement. In part, the inseparable neural involvement can be in the form of afferent input (noxious impulses from insult to mechanoreceptors, pain, inflammatory response) to efferent response as in muscular splinting, paresthesias, and diminished reflex response

There is a plethora of definitions for a subluxation or a subluxation complex, but for the purpose of this paper and the interest of clarity, the definition of a "subluxation complex" as mentioned by Tassell is:
A lesion or dysfunction in a joint or motion segment in which alignment, movement integrity and/or physiological function are altered, although contact between joint surfaces remains intact. It is essentially a functional entity, which influences biomechanical and neural integrity." (27)

The foregoing definition is complemented by a supplemental statement that *"the understanding of the subluxation complex continues to progress…to include additional anatomical, physiological, biomechanical, chemical and biopsychosocial factors,"* as the research and understanding develops. (27)

Further legal recognition was granted to the subluxation and the subluxation complex in a 2012 Texas court decision. The Court of Appeals found against the challenge by the Texas Medical Association and the Texas Medical Board, and that it legally recognised that chiropractors diagnose *"neurological conditions, and pathological and neurophysiological consequences"* that are affected through the spine and musculoskeletal system. Indeed, the court went further and *"acknowledged that a subluxation complex could have functional or pathological consequences that effect essentially every part of the body."* (28)

In 1971, a paper by Adams and Logue in the journal *Brain*, reported that the '*degree of subluxation'* was one of the factors when considering '*neural spondylosis* (which) *can be treated logically by altering the abnormal dynamics of the cervical spine, which may vary from patient to patient.'* (29)

In a further paper by these neurosurgeons, they noted that in relation to the dura, roots and cord, *"The relative amounts of movements depend upon the obliquity of the extrathecal roots and also upon the amount of movement at the related intervertebral joint."* This has to be a direct reference to segmental hypomobility and partial segmental fixation, and while not specifically identified as a VSC, the principles would seem associated. (30)

Interestingly, some more obscure terms portray differing aspects of a subluxation. While they are quite evocative, they do tend to encompass the nature of aspects of the lesion.

- Arthron (subluxation of a non-spinal articulation) (31)
- Vertebron (subluxation of vertebra) (31)

- Coterminous – (having the same boundaries or extent in space, time or meaning – in relation to facet overhang) (32)
- Complex nonlinear relationships (33)
- Ortho-spondylo-dysarthrics (34)
- Spondylodyskinesia (35)

World Health Organisation

The World Health Organisation (WHO) has definitively acknowledged this enigmatic clinical finding. By formally listing the *"Subluxation Complex (vertebral)"* in the 2006 edition of the International Classification of Diseases (ICD-10), there can now hardly be reservations as to its acceptance and recognition. Nor can claims as to its existence be rejected. General inter-professional clinical recognition may however take a little longer in practical terms. (36)

Category M99 in the ICD-10 covers the topic *"Biomechanical lesions, not elsewhere classified."* It then specifies a supplementary sub-classification of the various spinal regions and extremities (0 to 8) – and interestingly, ICD-9 designated *"Abdomen and other."* I am unclear as to a *"biomechanical lesion (NEC)"* of the abdomen, unless it is visceroptosis. This is, however, listed as enteroptosis in the ICD.

These items are also coded separately in the ICD-10 where

- M99.0 is listed as "Segmental and somatic dysfunction" and
- M99.1 is listed as "Subluxation complex (vertebral)
- M99.8 is listed as "Other biomechanical lesions," with
- M99.9 as a "Biomechanical lesion, unspecified".

It would seem that a C1/C2 VSC would be coded "M99.1-1" and defined as a Subluxation Complex (Vertebral) of the Cervical Region/Cervicothoracic.Head region. It could also be classified as M99.0.1 Cervical Region/Cervicothoracic.Head region Segmental and Somatic Dysfunction – indicating more a functional aberration - perhaps a fixation or hypermobility.

An L5/S1 VSC would be classified as M99.1.3 – Lumbar region/lumbosacral Subluxation Complex (Vertebral) – indicating minor displacement. It could also be classified as M99.0.3 Lumbar region/Lumbosacral segmental and somatic dysfunction – indicating a functional aberration - perhaps a fixation or hypermobility.

The medical definition of a traditional subluxation would be covered in the ICD-10 under the following classifications - M43.3-M43.5 viz;

- M43.3 Recurrent atlantoaxial subluxation with myelopathy
- M43.4 Other recurrent atlantoaxial subluxation
- M43.5 Other recurrent vertebral subluxation.

I further note that item code M24.4 "Recurrent dislocation and subluxation of joint." "Excludes vertebral subluxation (M43.3-M43.5)." (36,37)

It is important to stress the neural elements in such a lesion as it is impossible to have a pure osseous 'subluxation', except in a skeleton. In other words it is more than a mechanical-physical articular displacement. In part, the inseparable neural

involvement can be in the form of afferent input (noxious impulses from insult to mechanoreceptors, pain, inflammatory response) to efferent response as in muscular splinting, paresthesias, diminished reflex response

These inclusions formalise the observations that are consistent with aspects of the concepts noted by chiropractors and osteopaths for over a century.

DISCUSSION

Many terms in the referenced literature and other sources refer to the distinct clinical finding of what is referred to here as a Vertebral Subluxation Complex (VSC). The difference between the traditional definition of a *subluxation* (a partial dislocation (38)) and a subluxation complex is reflected here by the separate terms listed in the appendices under basic elements of the VSC.

The principles of this clinical finding have been widely recognised and regularly focussed upon by all the manipulative professions, including many medical practitioners. Patients, third party payers and administrative bodies have also acknowledged the VSC. This is further supported by patient demand and the apparent positive outcomes following manipulative care.

Over some decades, a trend seems to have developed of composing this plethora of new terminology as descriptive terms relating to the same entity. This extensive list of related terms serves to emphasise the range of components which underlie this multifaceted clinical finding.

When so many related terms allude to essentially the same biological entity, logic would suggest that it must be of clinical significance. It is difficult to conceive of any other circumstance - especially a biomedical one that has attracted so many attempts at naming the same identity or elements of it. Such a list implies a form of endorsement - namely one accepted and understood by so many health professionals and patients. In essence, and in this instance, the terms primarily refer to the anatomical and functional integrity of intervertebral relationships, but can also refer to other anatomical articulations.

Not only does this proliferation of terms apply to intervertebral integrity, but a number of similes have also been identified in relation to functional disturbance (subluxation) of the sacroiliac articulations. (See Part II, Appendix 11)

One advantage of such a list is that just by reading it, one is led to a reasonable understanding of a VSC. The existence of this list also suggests that the effects of this clinical entity are complicated, complex and biologically influential. It has progressed way beyond the old ‘bone out of place’ model. Sophisticated research has exposed more about the VSC and recognises its role in neurophysiology. (6,14-22)

The term subluxation may be notably different to a vertebral subluxation, with the former referring to the mere physical displacement of an articulation. Use of the term subluxation (as less than a dislocation) tends to ignore the other structures and

functions that can also be disturbed. Osseous displacement (‘out of place’) may frequently, but not always comprise only one of the basic elements of the VSC.

In relation to a VSC, it is considered important to consider all elements in a subluxation complex involving a disturbed articulation. Not only is there articular dysfunction – with or without displacement, but there are critical efferent and afferent neural elements involving somato-autonomic reflexes and a cascade of noxious sensory input from mechanoreceptors, and proprioceptors. (39) In addition, other soft tissue structures, as in ligaments, muscles, tendons, discs and cartilage tissue, together with their neural components, can be affected. Significantly, any inflammatory response with vascular and neurovascular considerations must also be considered.

Ultimately, it is the end response of these stimulated neural elements, both centrally and peripherally, that determines the type and degree of physiological dysfunction that comprise subluxation-related signs and symptoms.

A VSC may be described as Neuromechanical Interarticular Pathophysiological Segmental Dysfunction (NIPSD). This descriptive term emphasises the potential for its remarkable influence upon the neurophysiology. As suggested by the appendices, the term "Vertebral Subluxation Complex" implies encompassing all the pathophysiological components thought to be involved in such a clinical entity. In the end however, it is the definition provided at the time of using the term that decides its connotation in each instance; suffice to say that the key element is of and from neural influence.

Metaphors have also evolved in relation to the *procedures* involved in addressing the VSC) – the vertebral adjustment. (See Part II, Appendix 12) These techniques are a refined and specific form of the more imprecise manipulation. Rather than a general mobilisation of a spinal region or peripheral articulation, an adjustment is directed at a specific segment in a specific direction, and correlated with certain clinical findings.

As there are inevitably periarticular structures and functions involved within a vertebral subluxation, disturbance or dysfunction of these comprise the complex. The important difference between a peripheral articular subluxation and a vertebral subluxation of the spine may be that the latter is highly neurologically sensitive, both physiologically and anatomically, with broader influence and ramifications than the neural disturbance and elements associated with disrupted peripheral articulations. In addition, there is the convergence of afferent and efferent neural activity through the neuraxis. (40)

Despite the rather extensive lists (See Part II, Appendices 1-10), some still question the VSC hypotheses, or demand more proof as to its existence and significance. (41) A further 49 terms relate to subluxation of the sacroiliac joint (See Part II - Appendix 11). It is suggested here that there has never been any formal independent research which rejects the concepts.

On the other hand, there is considerable confirmatory research, as well as clinical evidence supporting its biological effects. (42) The literature suggests that there can be dramatic patient response in the alleviation of VSC-associated signs and

symptoms connected with a number of conditions. Observed phenomena is a recognised form of gathering scientific evidence. (19,43,44)

A Stanford University publication has outlined the role of anecdotal evidence in science under 'Theory and Observation in Science' as recently as 2013.

> *"Scientists obtain a great deal of the evidence they use by observing natural and experimentally generated objects and effects.Much of the standard philosophical literature on this subject comes from 20th century logical positivists and empiricists, their followers, and critics who embraced their issues and accepted some of their assumptions even as they objected to specific views.Their discussions of observational evidence tend to focus on epistemological questions about its role in theory testing. This entry follows their lead even though observational evidence also plays important and philosophically interesting roles in other areas including scientific discovery and the application of scientific theories to practical problems."* (45)

Evidence has been identified indicating specific vertebral segments being associated with certain anatomical structures and also with subluxation-related syndromes. These findings relate meaningfully to clinical practice of the manipulative sciences and tend to confirm years of clinical observations. In recent years they have involved the spinal levels of C2, and T3-T6. (46-52)

The appended list is not necessarily claimed as high-level formal evidence; however, the avalanche of terms alone tends to indicate that the VSC is a significant clinical finding.

In considering this proliferation of terms essentially referring to the same entity, it is reasonable to conclude that recognition of a clinical finding has occurred. The reason for so many terms is somewhat of a puzzle. Various authors may be attempting to claim an association with an important clinical entity, or each may be trying to improve on identifying and describing the lesion. Having been recognised for many decades, it is not as though it is a new discovery.

With so many authors nominating the existence of this apparent spinal pathophysiological entity, an explanation for the plethora of terms could be explained by Walters who opined that like historians, authors "…like to claim that their work is a 'new history." (53)

Not only has a range of terms relating to the VSC developed, but a number of procedures have been adopted, implemented and offered (See Part II - Appendix 12) under a variety of practitioner titles (See Part II - Appendix 13) to address correction of VSCs. Again, this would be far from deprecation of the whole concept of VSC's and their treatment, but would appear more as a tacit endorsement.

As noted by Peters, Ebrall and Gatterman in 2009, there are interesting reservations over the usage, significance, and indeed existence of the VSC. (41,54,55) However, the volume of observations listed, the range of professions that address the finding and the variety of terms for the techniques used to achieve resolution of the VSC, must go some way in support of the phenomena.

It seems contradictory that a strained joint in any other part of the body apart from the spine, is not challenged – yet the VSC has been queried. Indeed, there is not a call for articular strains to be quantified in the way that a VSC seems to attract such a demand.

Some vertebral subluxations may not be demonstrable radiographically because they consist primarily of the dysfunction component than the displacement element. This would be comparable with strained ankle or TMJ dysfunction that may not be objectively definable at times either. Further, there are also other conditions that can lack objective clinical confirmation. Clinically proving the existence of VSCs would be similar to proving the existence of conditions such as headaches, neuralgias, pseudoangina and dysmenorrhea. There is a dearth of independent testing for these, so that they also require significant subjective input – both from the patient and the practitioner.

One would have difficulty proving that a patient may be experiencing a headache, sciatica, dysmenorrhea or even angina (or pseudoangina)

Wenban found that the term “subluxation” appeared in only 6.3% of original research published in peer-reviewed chiropractic scientific journals during a period 1990-1999. (56) While one would suspect that use of the term has become more widespread in the past 14 years, perhaps part of the reason lies in the use of so many alternative terms.

It would be hoped that while the cited authors all recognise a VSC as a clinical lesion or elements within it, eventually unifying nomenclature will evolve.

CONCLUSION

This extensive list of nomenclatures attributed to a VSC by so many different authors, would signify it having attracted significant clinical attention. It would therefore also suggest that a VSC has attracted fitting recognition as a biological phenomenon. The broad range of related terms which appear in chiropractic, osteopathic and physiotherapy literature reinforce the general recognition and existence of these clinical articular derangements particularly of the spine. Of note within this list, there are some 98 alternative terms relating to the act of manipulation (38 medically referenced). There are a further 50 terms (32 medically referenced) relating to alternative names for professions involved in manipulation as an occupation. (See Part II - Appendices 12 and13)

Whether a VSC is designated a concept, hypothesis, model, theory, paradigm or a construct is immaterial. It has been recognised here in one form or another as a clinical entity. Further, as a rudimentary example, the extent of Part II - Appendix 1 effectively acknowledges the various elements that constitute what may be termed a pervasive biological finding.

The variety of terms in Appendix 1 serves to highlight the fact that a subluxation is a “complex”, in that they imply involvement of not only the “bones and joints” of an articulation, but periarticular structures - especially neural ones. They also illustrate

that displacement is not necessarily present, but that functional disturbance is perhaps the key element – both neurologically as well as mechanically.

Such recognition of a VSC in itself should warrant a degree of support and credibility as evidence of a feasible organic condition. Substantially more formal research is steadily evolving, and is already providing justification for ongoing acceptance of the VSC as an observable clinical reality of consequence.

It is recognised that to ignore the evidence that already exists and which the authors listed here have identified, may only constitute a minute amount of that evidence supporting the VSC hypotheses. It is suggested here that the evidence does indeed exist except when it is deliberately not looked for or if it is ignored.

The VSC is the same entity as that identified nearly 120 years ago by DD Palmer as a vertebral subluxation; and more recently designated a complex.

As presented, there is such a range of terminology surrounding the VSC, one wonders why more significance is not afforded this clinical entity.

The importance of this common clinical finding is emphasised by the extensive list of metaphors and synonyms used to describe it, many of which describe aspects of its presentation. With so many patients attending professionals for a manipulative procedure to address subluxation-related disorders, the entity in the spine that is manipulated commands calls for identification – preferably through more limited terminology.

Having attracted over 650 terms associated with VSCs, would seem to clinically signify noteworthy lesions or elements of them. Nevertheless, all the terms seem appropriate to varying degrees. Perhaps in time, a system of refined classification of VSCs will lead to further differentiation and specificity of segmental subluxations. They could then be categorised by the type, direction, pathoanatomy, pathophysiology, among the signs and symptoms which present clinically.

The lists represent the observed or mentioned spinal pathophysiological entities noted by so many authors. This phenomenon is attracting continued research which would seem warranted in order to explore the biological potential of these lesions. Such research could clarify a number of the following aspects of the VSC:-

- The precise nature of this entity.
- The neurological ramifications of the particular segmental finding, both afferent and efferent.
- The physiological ramifications of the particular segmental finding.
- The pathophysiological ramifications of the particular segmental finding.
- The pathological ramifications of the particular segmental finding.
- The functional ramifications of the particular segmental finding.
- The expected signs and symptoms associated with a particular segmental finding.

Due to the many citations in the medical and chiropractic literature, and elsewhere, there is justified awareness of this spinal phenomenon identified as a Vertebral Subluxation Complex. If this clinical entity is not identified under one of the weight of

terms offered here, then chiropractors, osteopaths, physiotherapists and manipulating medical doctors would be addressing a non-existent lesion – a normal, physiological articular relationship.

If greater multi-professional acceptance of the formal existing research into the VSC had been adopted decades ago by established publications, a list such as that comprising Appendix 1 may not have evolved. It could however, have then drawn appropriate recognition of an influential clinical lesion that may well have positively influenced standard health practices and patient suffering for a particular range of conditions.

Such a proliferation of the terms used and recorded should be an indication for the encouragement of continued inquiry into such phenomena, with clarifying reality being the objective. Dismissing these observations without fair and thorough investigation could hardly be regarded as scientific – or in the interest of those patients who report a positive response to, and actively seek their amelioration.

One cannot help but think that if there were no benefits or health contributions from the manual therapies, there would not be so many terms created – nor the proliferation, persistence, adoption of, and demand for the science and techniques offered by so many professions.

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