

# VERTIGO & LOWER CERVICAL SUBLUXATION UTILISING THE GONSTEAD SYSTEMATIC APPROACH IN CHIROPRACTIC

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## ABSTRACT

*A 75 year old lady presented with vertigo. The subluxation found to be causing this symptom was in the lower cervical region and this was corrected using a specific Gonstead Chiropractic adjustment and a positive result was achieved. This case study explains the possible mechanism of how the lower cervical subluxation was causing vertigo and how its correction can influence central integrative neural processing.*

## INTRODUCTION

Vertigo is a common and distressing symptom. It is important that the history is thorough in order to establish that what the patient is describing really is vertigo. Patients often describe non specific symptoms such as light headedness or giddiness, which can be mistaken for vertigo, but true vertigo is characterised by a false sensation of movement described as a spinning sensation (1).

The timing of the attacks, duration, associated symptoms and the triggering factors all help determine the cause of vertigo of which there are many from benign functional impairments to more serious and sometimes life threatening causes. It can therefore be quite daunting for the practitioner.

A common type of vertigo is Benign Paroxysmal positional vertigo (BPPV). Patients experience brief episodes of vertigo, lasting about 10-15 seconds and occurs with a change of head position (1). Attacks are not accompanied by vomiting, tinnitus, or deafness, however, nausea may occur (2) One accepted theory of causation is that fine pieces of floating crystals that are loose in the labyrinth settle in the posterior semi-circular canal and generate endolymphatic (fluid) movement (murtagh). **It can also be a distinct form of cervical dysfunction, due to injury or degenerative change (2)**

The cervical spine is known to have an extraordinarily rich proprioceptive system, and a very close relationship to balance and postural control which puts the Chiropractor in a very good position to handle such cases. (3)

While it is well known that the upper cervical region is most commonly involved in these cases, lower cervical subluxations, although not the most common, can be involved (4) and often missed by practitioners who may in such cases incorrectly adjust the upper cervicals.

## **CASE HISTORY**

A 75 year old lady presented with vertigo/dizziness. She described it as feeling like the room is spinning. It only lasts a short time during which she feels like she is going to pass out. She hangs on to something if she can and then the dizziness goes away. She may have it a few times in one day, but not every day. There is no associated nausea, probably because the dizziness is not there long enough. She notices it in the shower when washing her hair and if she bends down.

She first experienced vertigo 5 years ago for a period of time after her mother passed away, and then did not have it for many years. It has returned in the last couple of months and becoming more frequent with time. She feels it is stress related as she has been busy lately looking after grandchildren and doing a lot more than usual.

History has also revealed lower back pain which has been present for many years which she described as aching across her lower back. This is also becoming worse with time.

## **CLINICAL FINDINGS /ASSESSMENT**

Structural analysis showed a reduced cervical curve, increased thoracic kyphosis and a reasonably normal lumbar lordosis when in the standing position. When standing behind the patient, a right head tilt was observed.

Static palpation revealed oedema and tenderness over the C6 spinous process, L5 spinous process and over the left sacro-iliac joint.

Motion palpation revealed restricted motion at the level of C6, left sacro-iliac joint and L5.

Instrumentation identified a reading slightly inferior to the C6 spinous process and also at the inferior part of the L5 spinous process.

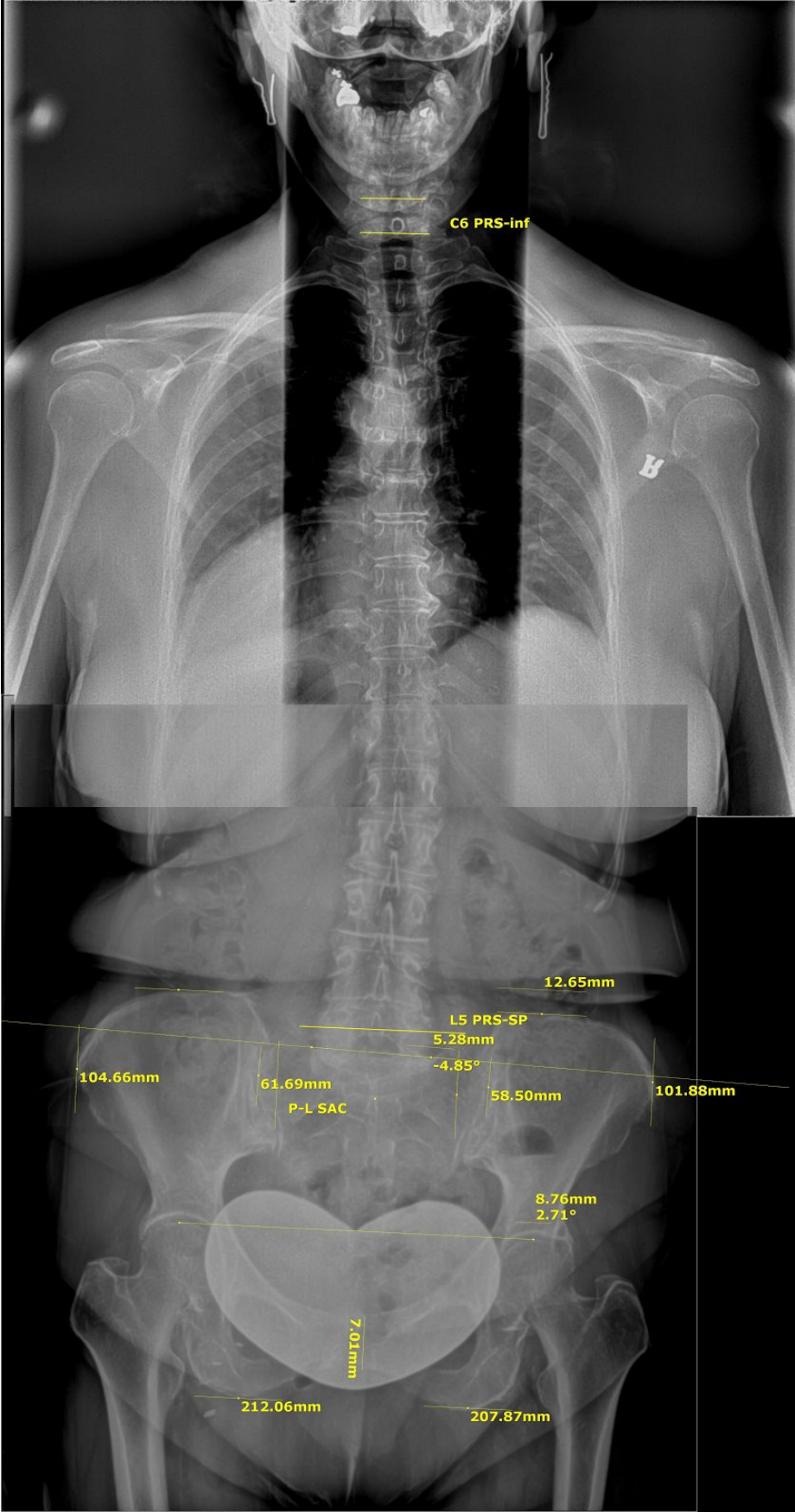
## **RADIOGRAPHIC EXAMINATION**

A full spine series of spinographs were taken in the weightbearing position. Listings determined from the radiographs were:

C6 PRS-inf

P-L Sacrum

L5 PRS-SP





## **CHIROPRACTIC DIAGNOSIS**

The clinical findings indicate vertebral subluxations at the left sacroiliac joint (P-L sacrum), C6 PRS-inf and L5 PRS-SP . Upon presentation, the C6 was the major subluxation relating to the vertigo so this was adjusted on the 1st visit.

## **TREATMENT AND RESULTS**

This patient has had 6 chiropractic visits. On the first visit, the C6 was adjusted and a very satisfactory set was achieved. She described feeling a lot freer in her neck right away. She returned three days later for her second visit reporting that she felt like a new woman after the first adjustment. She felt her dizziness had improved as she had noticed it a couple of times only. Chiropractic analysis of the C6 revealed that subluxation findings were still present so this was adjusted again. She returned again 1 week later stating that she had only experienced dizziness once, which was a couple of days after the last adjustment, and none since. She also described her neck movement as being a lot freer. On this visit, P-L sacrum was adjusted, as subluxation findings were present and C6 did not need correcting. Nothing else was adjusted on this visit.

She then returned one week later, and reported no dizziness. However, her lower back had been aching in the last 2 days. P-L sacrum was adjusted.

She returned 1 week later again, reporting no dizziness however her lower back was still bothering her. On this visit, L5 was adjusted as it was showing all subluxation signs and the sacrum was clear. The patient reported one week later that she had not had lower back pain since that adjustment.

This patient will continue to be checked and adjusted only when all signs of a subluxation are present.

## **DISCUSSION**

This case demonstrates the efficacy of the Gonstead system of Chiropractic. When using specific spinal corrections in the lower cervical region, positive results can be achieved when managing patients with vertigo.

Gonstead found that the upper cervical region, especially C1-C2 was involved in patients with vertigo (5). However, as stated in the footsteps of Dr G, these cases can be corrected from subluxations found anywhere in the cervical spine (6). In this case, the patient's vertigo improved after correcting the C6 subluxation.

In order to explain how this can be achieved, it is important to understand the mechanism of how our brain controls our posture and stability because this is not a situation where local nerve pressure in the neck has caused this patient's vertigo, but rather a more functional neurological deficit. It is a central neurological processing issue (7).

There are three main sensory inputs involved in maintaining balance, posture and stability. These three sensory inputs include:

- Visual input from the eyes
- Vestibular input from the inner ear
- Proprioceptive input from joints of the spine, especially the cervical spine. (7)

All of these sensory inputs converge directly onto the vestibular nuclei in the brainstem which controls our spinal postural muscle tone and reflex eye position in response to movement of the head in space.(7) (3)

Disruption or mismatch of any of these three inputs leads to a distortion of orientation and sense of imbalance and vertigo can be the result. (7) (3)

In this situation, the C6 was a primary subluxation. Considering the explanation above, it is possible that lack of spinal movement at this level has altered the proprioceptive information going to the vestibular nucleus, thereby causing the input to be deficient, leading to the symptom of vertigo. Therefore, by removing the C6 subluxation, we are correcting the altered proprioceptive input from the spinal joints to the brainstem, thereby correcting and normalising the whole mechanism that controls balance and stability and improving the vertigo.

Another possible explanation for the patients vertigo is via vertebral artery dysfunction which may be caused by altered neurology from the C6 subluxation.(4)

The vertebral arteries ascend via the cervical vertebra and enter the cranium through the foramen magnum. The vertebral arteries give rise to the posterior inferior cerebellar arteries which play a significant role in balance by supplying the lateral medulla where the vestibular nuclei reside. (8).

When the patient's vertigo resolved and the C6 was no longer showing signs of the subluxation, subluxations in the lower back were addressed in order to remove nerve interference and also to balance the foundation of the spine. This is important in order to give stay put value to the C6 vertebra.

## **CONCLUSION**

This case demonstrates the importance of two key principles of the Gonstead system.

1. "Find it, fix it and leave it alone to allow the body to heal itself". In cases of vestibular issues, it is often assumed to be an upper cervical problem. If this is not the case, a positive result will not be achieved when adjusting this area. When the practitioner applies the Chiropractic principles as developed by dr Gonstead to find the subluxation, accepts it where it is found and utilises specific adjustments to correct the subluxations, normal function can be restored in the patient allowing the body to heal itself.

2. The level foundation principle. Dr Gonstead developed his technique based on this principle. He found that the bodies foundation was formed by the pelvis. When it is level, taking into consideration individual anatomical differences, there will be maximum balance and stability in the spine. This allows forces of gravity to work towards maintaining the chiropractic adjustment. (9)

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