

Improvement in Forward-Head posture, Mental Health and Erectile Function in a 42-Year-Old Male under Chiropractic care: A case report

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Abstract: A 42-year-old male presented for chiropractic care with primary complaints of worsening low back pain with referred pain spreading to both glutes and down his legs.

A complex history of mental illness, stress, and alcoholism as well as dependance on pharmacological intervention was noted.

Over the course of care, the patient noted significant improvements in his mental health leading him to decrease his antidepressant medication. He also noticed significant improvement in erectile function.

Outcomes were consistent with improvements in objective tests, postural findings, and with no other significant changes to lifestyle or medical management. This case indicates that further research into chiropractic care and mental health outcomes, as well as chiropractic care and male reproductive health may be beneficial.

Indexing Terms: Chiropractic; erectile dysfunction; LBP; depression; mental health.

Introduction

While the link between chronic low back pain and presentations of major depressive disorder and other mental health comorbidities are well represented in literature, emerging research indicates that forward-head posture may represent a specific connection in terms of mood disorders.

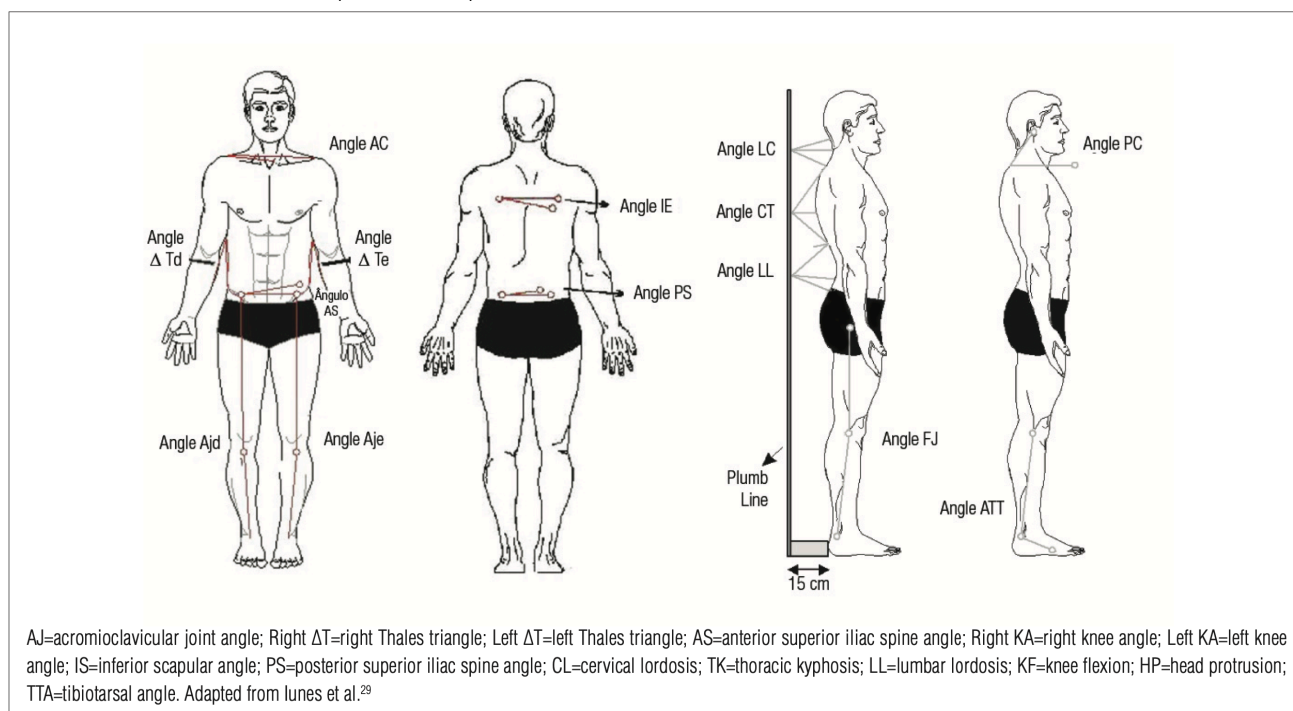
A study of women aged between 20 and 30 with normal body mass indices found a relationship between the *Beck Depression Inventory* and the forward head posture measured by what the researchers incorrectly named '*the angle of Tales*' ($p = 0.01$); this is correctly the '*angle of the Thales triangle*' (2) as a modified measure of head posture taken from an instrument used in physical therapy, (3) see Figure 1. (4) It is not in common use among chiropractors where

... A whole-body lens resulted in improvements in Quality of Life, pain, movement, and erectile function. An intense treatment protocol was used with about 40% of care provided at no cost'



reliance is place of radiographic images to support empirical, dynamic observations and ROM assessment.

Figure 1: Measurements used by physical therapy researchers. From (4)



There is are statistically significant relationships among head inclination and shoulder inclination and depression, sadness and postural change. (1, 2, 3, 4)

The more valuable findings are currently reported by CBP® (5) researchers that forward head posture when seated creates physical interference on cervical nerve roots which may produce clinical signs and symptoms.

Cross-sectional data has established an interaction between depressive symptoms and thoracic kyphosis. This led researchers to remark that '*recurrence of depressive episodes is associated with measures of postural misalignment.*' (6) However this study did not establish which variable preceded the others.

A separate randomised controlled trial indicated there may be a connection between forward head posture and increased scores on the *Beck Depression Inventory*, and lower pain pressure thresholds. (7) The study, which focused on smartphone usage specifically, found that higher cervical angles coincided with elevated depression status. While the difference between the control group that did not receive rehabilitation and the intervention group was statistically significant, it did not confirm causality.

It is undeniable that depressive disorders have potentially complex aetiology. When we bring together structural and biopsychosocial factors, as well as subluxation-based concepts around trauma, toxins, and stress, it creates an opportunity for Chiropractic research to step into the gap and investigate how posture, subluxation, and other factors may influence the presentation of pain, dysfunction, and mood. As it stands, indications for Chiropractic care influencing the structure and function of various brain regions is both present and emergent. (8, 9, 10, 11)

At present, case report data is the only form of evidence linking chiropractic care to mental health outcomes. Additionally, only one case report currently exists in which a course of chiropractic care was concomitant with a decrease in the frequency and severity of erectile dysfunction. The case singled out Gonstead Technique as the method of care. (12) These factors both create an impetus for

further data into the efficacy and effectiveness of Chiropractic care for both mental health and male reproductive health.

The present case report examines the progress of a patient suffering with pain, depression, and erectile dysfunction under Chiropractic care.

Case details

A 42-year-old male presented for care at a Chiropractic clinic with a primary complaint of low back pain with referred pain in the glutes and legs. A novice to Chiropractic care, he was a bricklayer by profession and his activity level was currently limited by significant pain.

At the time of presentation the patient had been experiencing worsening low back pain since 2017 (approximately four years). Pain had begun in his lower back and he had '*pushed through*' to continue working as a bricklayer, his career for more than twenty years, however, this caused his pain to worsen. He described his pain as '*deep and central, spreading into both glutes and down the legs*.' MRI and CT reports within the past two years indicated disc herniation (See [Images](#)).

Initial attempts at managing the pain included consultation with a physical therapist who applied dry needling. The patient had also been referred to a specialist overseas, and had seen a General Practitioner (GP) which had resulted in him being placed on a surgical waiting list for more than one year. At the time of presentation, he was managing his pain with *Panadol Osteo*, and *Nurofen*. He was also taking *Lyrica*.

At the intake appointment the patient described several major stressors. These include having been in two major car accidents, one of which involved the death of the driver. He had also witnessed a death in the workplace when a wall collapsed onto a colleague and crushed him. Additional significant stressors included the death of his father. At the time of presentation, he was unable to walk further than 150 metres and could not work due to the severity of his condition. He woke every morning to severe lower back pain and was living with his mother due to the resultant financial difficulties.

He also complained of neck pain, hip issues, and noted he was aware of problems with anxiety, alcoholism, and depression.

Clinical findings

The patient was in significant pain on presentation to the clinic. Photos of posture were taken, along with radiographs and medication details as well as self-reported pain levels on a numerical pain scale. His ability to undertake activities of daily life were also assessed.

His slump test was positive with neck flexion only. Notably, this was aggravated further by leg raise bilaterally. A *Rhombergs Test* indicated swaying to the right. Weight scales demonstrated a 72/74lb (32.6/33.5kg) weight distribution inequality, however this was considered to be within an acceptable margin of error by the chiropractor. Other clinical findings included the following:

- ▶ The patient's lateral lower leg and foot were numb on the right to pinwheel compared to left
- ▶ Muscle tests returned the following values hamstrings 3/3, glutes 3/2 (the right glute improved with a straight L4PI push), quads 3/3 and dorsiflexion of foot 4/5 (all left to right respectively)
- ▶ Prone knee flexion caused both low back pain and rectus femoris tension.

The patient's aims for care included avoidance of surgery. The Chiropractor advised that this case would almost certainly remain surgical but given the significant wait time, conservative management of his condition would be prudent. This advice was based on the Chiropractors' concerns for the psychological wellbeing of the patient given his high pain levels, drinking and smoking history, and significant relationship stressors occurring at the time. Further aims of care stated by the patient were for increased sleep (beyond four hours 'on a good night'), increased capacity to walk (i.e. further than 150 metres) and eventual to return to work as a bricklayer.

He commenced a course of care, during which he was adjusted using numerous techniques including ABC, SOT, Gonstead and Logan, using a CBP® lens to interpret the radiographs. More specifically, ABC standing adjustment and lower limb protocols were used along with SOT pelvic categorisation, Logan basic and Gonstead seated chair work. Particular focus was given to reflexes and range of motion in the hopes that this would impact sleep quality, pain levels and self-reported Quality of Life.

Treatment occurred 5 times per week for 12 weeks due to the severity of his pain and impairment (40% of visits were gratis). Additional care recommendations were limited to lifestyle changes around alcohol and cigarette usage, and gentle exercise within the bounds of his capacity levels. Use of a small *Denneroll* was also recommended to support rehabilitation of the cervical curve.

Outcomes

Progress examinations were undertaken every four weeks, with a larger comparative examination undertaken at the 12-week point.

Overall, the patient's posture changed significantly throughout the course of care. His ability to walk improved significantly, as did his demeanour. He reported changes in pain levels, a reduction in usage of and reliance on pain medication, and a return of normal morning erections which had been absent for quite some time. The latter was a novel finding of the case, but met with a large degree of enthusiasm by the patient.

At the 4-week progress exam:

Initially, the patient reported greater ease moving his upper body, but not the lower body. He also reported that he was reducing his *Lyrice* dosage. Upon adjusting said usage downwards he noticed a spike in low back pain and a new, intense pain in his right testicle. Deep tendon reflexes were generally normalising (at C5,6,7 2/2, L4 2/2 and S1 0/2). Additionally, his self-rated health was now a 5/6 out of 10 as opposed to an initial numerical rate of 3/10 on intake.

At the 8-week progress exam:

Pain in his feet was now beginning to reduce and leg radiations lessening, however the pain in his back was '*more intense*'. At this point, he noticed again that he had begun waking up with morning erections. He had stabilised his *Lyrice* use at an 80% reduction of his original dosage and was beginning to notice improvements to sleep quantity and quality. Pain was reducing in the legs and receding into the back.

At the 12-week comparative exam:

At this examination the patient noted that he was breathing easier and that his '*circulation had improve*'. The latter was in reference to further normalising of erectile function, with improvements in his ability to weight-bear on his feet. His medication use remained stabilised at 80% of the dosage used prior to entering care. Additionally, he could stand longer on his feet, making walking and his hobby of fishing easier.

Overall the subjective QoL improved significantly and his sense of humour returned. He was more engaged with the people around him as he moved through the office, and particularly outspoken about the more unexpected positive outcomes of care.

Findings were confirmed by posture photos, physical examination findings, radiographs and patient self-reports.

Discussion

A degree of pain control was achieved in the context of what was almost certainly going to be a surgical case. However, the return of reproductive function and the reduction in medication intake indicates a system returning to normal. Patient self-reports regarding mood and antidepressant usage (*Lyrice*), as well as anecdotal (observational) data by the Chiropractor indicate a significant improvement in mental health and coping. Given the significant level of pain, impairment, loss of

quality of life, and potentially self-medication using alcohol and tobacco products, the improvements in pain and quality of life outcomes may alone be responsible for this.

Clinically, the most significant factor in the patient's improvement was likely the change in his head/neck posture. The dural tension created from the curvature of his cervical spine at the beginning of care would feasibly have impacted on the ability of the cauda equina to 'bend' around the canal stenosis. The adverse neuronal and vascular effects of prolonged stress caused by forward head posture are not limited to deformities of the neural elements in the spinal canal, but can contribute to a numerous disease processes. (13) There are known negative clinical outcomes associated with forward head posture. (5)

Conclusion

This case highlights the importance of a full spine, structural approach to Chiropractic care especially as it relates to the care of larger disc herniations. It also links to other research into the effect of forward-head-posture correction in the management of lumbosacral radiculopathy. (9) More specifically, the randomised controlled trial illustrated a link between posture, dural tension. and outcomes both for disc dysfunction and for nervous system health more broadly.

As the present paper is a single case report, it is inherently limited in that generalisations cannot be made and causal factors cannot be firmly established. Furthermore, the novel findings of the case meant that objective measurements for mental health and other areas of dysfunction were not taken at the beginning of care and could not be reassessed at the end. As the patient was a frequent user of alcohol, this may have limited his ability to recover.

Future research into chiropractic care and mental health, as well as chiropractic care and male reproductive function would be beneficial, as would in-depth studies into the use of radiography as opposed to differential diagnosis alone in Australian Chiropractic settings

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About the chiropractor

Dr. Oliver Croke is a second generation chiropractor and was adjusted by his father shortly after birth. Having grown up listening to stories of how chiropractic can change the lives of people, he commenced study at RMIT Bundoora and graduated in 2017, having been recognised by his peers as the most well-researched student in his year.

Since his graduation, he has been caring for patients in Northern Victoria and rural New South Wales. He is passionate about structural approaches to chiropractic care.

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Images





Images: MRI - LUMBAR SPINE

Clinical History: L4/5 canal stenosis and protrusion.

Findings:

Vertebral Alignment: Normal.

Vertebral Marrow Signal: Normal. Vertebral body heights are maintained.

Lower Spinal Cord: No disc bulge, canal stenosis or neural exit foraminal narrowing demonstrated. The conus terminates posterior to the L1 vertebral body.

L1/2 and L2/3: Preserved disc heights and hydration. No disc bulge, canal stenosis or neural exit foraminal narrowing.

L3/4: Mild disc desiccation with mild left foraminal disc protrusion, resulting in mild narrowing of the left neural exit foramen. No evidence of canal stenosis.

L4/5: Disc desiccation with mild loss of disc height. Large disc protrusion, severely indenting the thecal sac and completely effacing CSF surrounding cauda equina nerve roots. This disc protrusion measures 16mm in craniocaudal height and approximately 18 x 11mm in transverse dimensions (right to left by AP). L4 neural exit foramina are patent.

L5/S1: Preserved disc height and hydration. No disc bulge, canal stenosis or neural exit foraminal narrowing.

Lumbar Facet Joints: No evidence of facet arthropathy.

CONCLUSION:

Large L4/5 disc protrusion resulting in severe canal stenosis.