



Chiropractic management of chronic testicular pain and discomfort: A case series.

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Abstract: This paper looks at the correlation between vertebral subluxations and testicular discomfort and pain. Three cases are used to give further clinical evidence between this cause and effect. Although it is important to rule out more sinister reasons for testicular symptoms, the potential neurological disturbance from a subluxated vertebrae as a cause should not be overlooked.

This case series reports the benefits that a patient may experience when a subluxation is identified and corrected in a specific manner.

Indexing Terms: chiropractic; Men's Health; testicular pain; testicular discomfort; chronic scrotal pain; orchialgia; Gonstead Methods.

Introduction

The topic of testicular pain and other related symptoms in the male reproductive system is a relatively limited one. Many would argue that the topic of female reproductive organ issues is a much more open and researched topic.

Different terms have been interchangeably used in the literature as well as by health practitioners: testicular pain, chronic testicular pain, scrotal pain, chronic scrotal pain, orchialgia, chronic orchialgia, and chronic genital pain are common terms to describe pain in and about the scrotum.

The testicles are a part of the male reproductive system. They are oval organs located inside the scrotum which is a fibromuscular cutaneous sac. It is divided into two compartments separated by a septum. Structures inside the scrotum include testes, epididymis, external spermatic fascia and spermatic cord. The scrotum physically protects the testes and facilitates temperature regulation to ensure ideal conditions for spermatogenesis. The testes are suspended from the abdomen, where they descend from during embryological development, by the spermatic cord. With them they carry a rich supply of neurovascular and lymphatic

... this paper challenges the idea held by some that multiple visits are required to achieve spinal correction in certain cases. We also demonstrate that in adults the sacral segments remain 'adjustable' and with good clinical outcomes'



supply. (1)

The testicles are responsible for the production of testosterone and sperm cells in males. Sperm cells are produced in the seminiferous tubes inside the testes. The testosterone is produced by *Leydig* cells in the testicles. Next to the testicles inside the scrotum are the *epididymes* where sperm cells are stored and mature. The *epididymes* have further connection to the *vasa deferentia* that transport sperm to the ejaculatory ducts. (2)

Testicular discomfort in males is relatively common and can be of great concern for those who experience it, especially when no clear cause can be found. Symptoms can vary from mild, transient, vague discomfort to constant excruciating pain. Swelling, discharge or blood in urine can also be experienced. There are many possible causes for these signs and symptoms. Pain and other symptoms can originate from the testicles but are often referred from other sources. Patients who suffer from different types of chronic testicular or scrotal discomfort often experience that a medical examination reveals no clear cause or shows any pathological findings. The most common medical treatment in these instances are anti-inflammatory medication or pain killers.

The role of Chiropractors

Chiropractic is based on the premise that the body is controlled and regulated by the brain via the peripheral nervous system. The human body has the ability to function and heal optimally if nerve impulses are allowed to pass without interference through the spinal column. We therefore examine carefully the pelvis and vertebral column for vertebral joint dysfunction that can create an associated interference to the neural systems that pass through it. This is termed *Subluxation* in the chiropractic profession.

Such a subluxation may alter the neurosensory integration in the brain and contribute to the development of an array of different signs and symptoms. Adjusting a subluxation have the ability to normalise incoming nerve impulses to the brain and allow it to know precisely what the status is outside and inside the body. This way the brain can also respond more appropriately and correctly to maintain homeostasis and health in the human body. (3)

This case report

presents the history, diagnosis, management and treatment of three adult males suffering from chronic and intermittent testicular pain and discomfort. It also demonstrates the potential neurological impact a vertebral subluxation can have on the human body as well as the effect specific hands-on chiropractic can have in these cases.



Figure 1: An anatomical map of the territory



Cases histories

Patient A

A 35y male presented with moderate intermittent right testicular pain over the last two months. He reported no signs of swelling, redness or discharge. There was no history of trauma or infection. He had no other physical pain of or discomfort in his lower back or pelvis. His chief complaint was upper cervical stiffness and frontal headaches. This issue was what brought him in to our clinic 18 months earlier. Since then he had been examined and adjusted when indicated in periods. He had experienced similar testicular symptoms in the past, but then it was milder and disappeared in a few days. Due to the persisting symptoms he was concerned and went to his medical doctor. The physical examination there was unremarkable, so he was sent out for an ultrasound, which showed no signs of anomaly or pathology.

Patient B

A 53y male presented with constant pain and swelling of the posterior testicles bilaterally over the last three months. The left side was more painful and radiated somewhat towards the left inguinal region. The onset was gradual with no clear cause. It was first noticed several years earlier and had come on periodically since. He had already been diagnosed with chronic epididymitis by his medical doctor and had just finished a course of anti-inflammatory medication. This had only moderately improved his signs and symptoms. The main reason the patient came in for a chiropractic examination was constant moderate pain in the lumbosacral and bilateral buttock region. He also experienced intermittent radiating pain into his hamstrings. The low back and pelvic pain had a gradually onset over the last week when he had started swimming again as an exercise after a 3-month break. No history of trauma or infection was otherwise reported.

Patient C:

A 34y male presented with intermittent mild bilateral testicular discomfort and numbness over the last 4 weeks. He had no history of trauma or infections. Neither had he experienced this in the past. No swelling, redness or discharge was reported. Due to the mild symptoms he had not yet seen a medical doctor but was concerned about the symptoms he was experiencing. He also suffered from constant moderate lumbosacral pain with a gradual onset 5 weeks earlier. No neurological changes in his lower limbs were reported.

Clinical findings

Patient A

Observation of the patient showed a normal lumbar spine. Visible slight swelling over the S2 tubercle.

Chiropractic examination revealed:

- > Instrumentation: No reading detected.
- Static palpation: Point tenderness and oedema on the S2 tubercle. Hypertonic bilateral gluteus medius muscles.
- Motion palpation: Restricted movement at the S2 level and sacroiliac joints.

Patient B

Observation of the patient showed a slight increase of the lumbar lordosis. Moderate swelling over the S2 tubercle. Short leg on right side.

Chiropractic examination revealed:

- Instrumentation: Reading at L5/S1 level.
- Static palpation: Point tenderness and oedema on the S2 tubercle, left medial sacroiliac joint and L5 spinous. Hypertonic bilateral gluteus medius and left erector spinae muscles.
- Motion palpation: Restricted movement at the S2 level and left sacroiliac joint.

Patient C

Observation of the patient showed a normal lumbar curve. Short leg on the right side.

Chiropractic examination revealed:

- Instrumentation: reading at L5/S1 level.
- Static palpation: Point tenderness and slight oedema on the S3 tubercle and the right medial sacroiliac joint. Hypertonic bilateral gluteus medius and right erector spinae muscles.
- Motion palpation: Restricted movement at the S3 level and right sacroiliac joint.

Radiographic examination

Full spine radiographic images were taken of each patient. Please see refer to pictures at the end of this paper.

The lumbosacral listings derived from the radiographs were:

- Patient A: S2
- Patient B: S2, left PIEX and L5 PLS-M
- Patient C: S3 and P-R

Chiropractic diagnosis

Following full Gonstead Chiropractic examinations and spinographic findings, the initial diagnoses made for the above cases were:

- Case A: S2 posterior
- Case B: S2 posterior and left PIEX
- Case C: S3 posterior and P-R

Treatment and outcomes:

Patient A was adjusted on the first visit with a S2 side posture push move. A single audible was heard. On the second visit 7 days later, the patient reported the testicular pain had disappeared the following day and not come back since. No signs of a subluxation of the S2 was detected this visit and therefore not adjusted. The patient has since been examined with 4-6 weeks intervals and the S2 has been adjusted on two occasions since. The testicular pain has so far, 6 months later, not returned.

Patient B was first visit adjusted with a S2 side posture pull move. A slight movement but no audible was noted. Due to the size of the patient compared to the practitioner another adjustment was performed prone on the Hi-Lo bench on the same visit. A better correction and single audible was then achieved.

On the second visit three days later, the patient reported the majority of the bilateral posterior testicular pain had disappeared. The left testicle and inguinal region though were still painful. On this visit no signs of subluxation of the S2 were detected, but the left sacroiliac joint had all the signs of a subluxation and was therefore adjusted that day as a PIEX.

On the third visit, one week later, the left testicle and groin had improved moderately. On this visit the S2 was again adjusted side posture with a pull move.

When he returned for his 4th visit a week later he reported no testicular symptoms. On this last visit the pain in his lumbopelvic region had returned towards the right sacroiliac joint. It was found subluxated and adjusted as an IN ilium. Due to traveling he followed up with his chiropractor overseas. Email correspondence a month later revealed he still had no testicular signs or symptoms.

Patient C was adjusted on the first visit with a S3 side posture pull move. A single audible was achieved. The patient reported that the testicular symptoms had disappeared the following day. The lumbosacral pain had also improved.

On the second visit the right sacroiliac joint was adjusted as a P-R with a push move.

By the third visit the testicular discomfort had remained asymptomatic and the lumbosacral pain had almost disappeared. No adjustment was performed on this visit as no signs of subluxations were detected on chiropractic examination.

Discussion

The number of men presenting in hospitals, medical offices and different types of pain clinics with chronic testicular pain is relatively low when compared to the overall number of patients suffering from acute and chronic pain conditions every year. Never the less, the effect on a person's quality of life can be enormous in many ways; physically, psychologically, socially and economically.

The causes of testicular signs and symptoms can be many and are often complex. In many cases no clear cause can be identified. Since there are no clearly established protocols for any evaluation and treatment regimen, this can contribute to a patient's fear and frustration. (4) In acute cases the most common cause is physical trauma as the testicles are located outside the body and are highly sensitive to pressure or trauma. Acute cases may also be due to inflammation of the epididymis or testicle (*epididymitis* or *orchitis*), infection or testicular torsion. Such cases require immediate medical attention.

Chronic or intermittent testicular pain, which lasts over 3 months and interferes significantly with a patient's daily activities is defined as chronic testicular pain or chronic orchialgia. (5) It most commonly appears in men in their 30s and incidence increase with age. This condition is responsible for between 2.5 - 5% of urology consultations today. In many of these cases, up to 50%, chronic pelvic or low back pain are also present. (6) Commonly it is also associated with chronic prostatitis, irritable bowel syndrome and infertility. (7) Research estimates that up to 25% of cases of chronic testicular pain or chronic orchialgia are of idiopathic origin. (8)

Common causes of chronic testicular pain are chronic epididymitis, inguinal hernias, kidney stones, hydroceles, varicoceles, prostatitis, previous surgery, tumours and referred pain from nerve entrapment. (9)

Physical examination is mainly through observation and palpation for swelling, tenderness and abnormal contours. In patients with chronic testicular pain physical findings are often vague and non- specific with minimal tenderness on palpation. (10) Supportive diagnostic tools include ultrasound, blood and urine tests. In cases with associated low back or pelvic pain an MRI or CT scan may be appropriate. If a medical underlying cause is detected on examination medication or surgery are the most common courses of action.

In idiopathic cases where no serious underlying cause can be found behavioural changes, antiinflammatory and neuropathic medication, exercises and injections may be administered. (11) Surgical intervention in idiopathic chronic testicular pain is regarded as the last resort by most authors. Solutions include spermatic cord blocks, *varicocelectomy*, *orchiectomy* and denervation of the spermatic cord. (12)

A vertebral subluxation can cause biomechanical as well as neurological changes in the human body. This case series reports how a vertebral subluxation can lead to testicular signs and symptoms.

The testicles are derived embryologically from the same level as the kidneys. Hence, they share a common autonomic innervation which is primarily sympathetic originating from T10- L1. The remaining innervation is parasympathetic from the S2-4 segments. (13)

The testicles have primary somatic sensory innervation from genital branch of *genitofemoral* nerve (L1-2), anterior scrotal nerves from *ilioinguinal* nerve (L1), posterior *scrotal* nerves from the *perineal* nerve (S2-4) which branch off the *pudendal* nerve and perineal branch of *posterior femoral cutaneous* nerve (S1-3). (14) There is a substantial overlap of sensory input from these nerves. At the same time an organ or tissue that share a common neural pathway with the scrotum or testicles (L1-L2 and S2-S4) can also refer pain to the genital area. Low back pain or *radiculitis* that affects the nerve roots between T10 to L1 can refer pain to the testicles as well. (15)

Through the sacrum passes five pair of spinal nerves. The S1-4 nerves originate from the cauda equina of the spinal cord. It travels passes down the sacral canal and exits through the sacral foramina. The S5 travels the same route, but it has its exit through the sacral hiatus. The innervation of the sacral segments is from the *meningeal* branches of these spinal nerves. (16)

To be able to properly understand the dynamics of a subluxation at the pelvic region it is important to understand both the clinical anatomy and its biomechanical properties. The bony pelvis consists of the innominate, sacrum and the coccyx. It creates three joints in the pelvic ring; the two sacroiliac joints and the pubis symphysis.

The sacroiliac joint is a diarthrodial joint and also a true synovial joint. It acts predominately as a stress reliever and the sacroiliac joints are placed in areas of maximal torsional stress. If the pelvis was a fused ring of bone the movement and alternating twisting forces from the lower limbs during gait would subject it to abnormal biomechanical stress. Eventually this would lead to a fracture of the pelvic ring. (17) It appears as nature has created a mechanism which perfectly balances the necessary movement and stability.

Figure 3: AP view of the pelvis and lower lumbar spine



The sacrum has two important roles. One as a base and support for the vertebral column. Second, as it is wedged between the iliac bones and an integral part of the sacroiliac joint, it transmits forces between the vertebral column and lower limbs. This allows forces to be transmitted from the spine laterally towards the pelvis and into the lower limbs and vice a versa. (18)

Most commonly the sacroiliac joints are created by connection of sacral segments S1-3 with the ilium. (19) To lock the sacrum together with the ilium, both have on its articular surfaces corresponding prominent ridges, prominences and depressions. At S2 this is particularly visible with a major depression named *Bonnaire's tubercle*. The anatomical articular surface of sacrum and ilium prevents excess movement anteriorly and inferiorly of the sacrum which is under vertical load from the torso.

Research reported by Bogduk shows how the sacrum is at S1 in the transverse plane wider posteriorly and narrower anteriorly, the opposite being true for lower sacral levels. This could explain the biomechanical predisposition for S1 to move or misalign anteriorly and inferiorly when under excess vertical load.

As the S1 has a wider posterior surface it has a tendency to separate the ilia as the S1 moves anteriorly and inferiorly. When this occurs, it may allow the S2 or S3 sacral segment to move in a posterior direction. Also, to some degree, this could explain how the L5 tends to misalign posteriorly and inferiorly when the sacrum at the S1 have moved in an anterior inferior direction.

Figure 4: R) lateral view (left) and posterior view (right) of the adult sacrum



One of the fundamental principles of the Gonstead system is its foundation theory. It states that a subluxation in the base of the spine, like the pelvis, can influence the spinal column above. This can create compensations or subluxations at vertebral joints further up the spine.

The chain of biomechanical events mentioned above could explain how a sacral and sacroiliac subluxation can also influence vertebral joints at higher spinal levels. (20) Although these case reports are mainly concerned with subluxations of sacral segments and sacroiliac joints this does not imply that this is the only region that can give rise to symptoms in the male reproductive system. Especially since it has nerve supply from lower thoracic, upper lumbar as well as sacral segments.

Chiropractors commonly observe how a compensation can also create nerve interference and therefore create bodily symptoms. (21) In the Gonstead system of chiropractic it is essential to always accept the subluxation where we find it regardless of the patient's presenting symptom. The topic of sacral subluxations also brings up the discussion on how and why this occurs in adults. It is believed to be predisposed by childhood trauma. The trauma can be sudden, like falling, but also gradual by for instance sitting for prolonged periods. The fusion of the five sacral segments starts around puberty and is usually complete between age 25-30. (22) [Editors note: Here, 'fusion' does not imply that a sacral segment may not subluxate nor that a corrective thrust has no purpose. At over 70y of age my S2 segment is adjusted as indicated by an experienced Gonstead practitioner with marked clinical benefits].

If a trauma leads to excess pressure on the sacrum it could create a subluxation that is not detected or become symptomatic until adult age. This topic is beyond the scope of this paper but deserves further exploration and discussion.

Considering the brief overview of the relevant anatomy and neurology above, it would be safe to suggest that a vertebral subluxation have the potential to create or contribute to testicular and scrotal signs and symptoms.

Conclusion

Chiropractors have historically clinically seen that a vertebral subluxation can cause many different signs and symptoms in the human body. This includes the reproductive system of both males and females of all ages.

This case series is yet another report of how specific hands-on chiropractic can help patients who have not been successful in finding answers in the established medical field. Looking at the anatomy, biomechanics and neurology of the pelvis and lumbar spine it makes logical sense that nerve interference from a subluxation in this region have the capacity to not only create discomfort and pain, but also cause abnormal function of reproductive organs.

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About

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The radiographs are here

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