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Varicocele resolution in a healthy male with Gonstead Methods chiropractic: A case report

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Abstract: A 39yo male presented with left testicular pain from a prominent varicocele of recent onset, and left low back pain. Examination revealed a primary left ilium subluxation of the sacroiliac joint (SIJ) which was corrected using specific Gonstead Chiropractic adjustments. The varicocele, the testicular pain, and low back pain resolved in a 4-week period.

Indexing Terms: Varicocele; Sacroiliac Joint; sacrum; S2; ilium; Gonstead; Chiropractic; Pampiniform Plexus; Testicular Pain.

Introduction

A varicocele is an abnormal enlargement of the vein that is in the scrotum draining the testicles. The testicular blood vessels originate in the abdomen and course down through the inguinal canal as part of the spermatic cord on their way to the testis. Upward flow of blood in the veins is ensured by small one-way valves that prevent backflow. Defective valves, or compression of the vein by a nearby structure, can cause dilatation of the veins near the testis, leading to the formation of a *varicocele* (Figure 1).

The term *varicocele* specifically refers to dilatation and tortuosity of the *pampiniform plexus* (Figure 2), which is the network of veins that drain the testicle. This plexus travels along the posterior portion of the testicle with the *epididymis* and *vas deferens,* and then into the *spermatic cord*.

Insufficiency of the valves in these veins leads to backflow into the *pampiniform plexus* and pooling of venous blood. One of the main functions of the plexus is to lower the temperature of the testicles. The most common complication of an untreated *varicocele* is higher temperature to the testes resulting in testicular atrophy causing infertility. (4)

> *... Chiropractic adjustments in the Gonstead Method resolved an issue that had been reviewed and treated from a medical perspective. The major learning point is to know when you need to physically examine genitalia and when you don't'*

Figure 1: Explanatory images, from ADAM. URL http://adamimages.com/Illustration/SearchResult/1/varicocele.

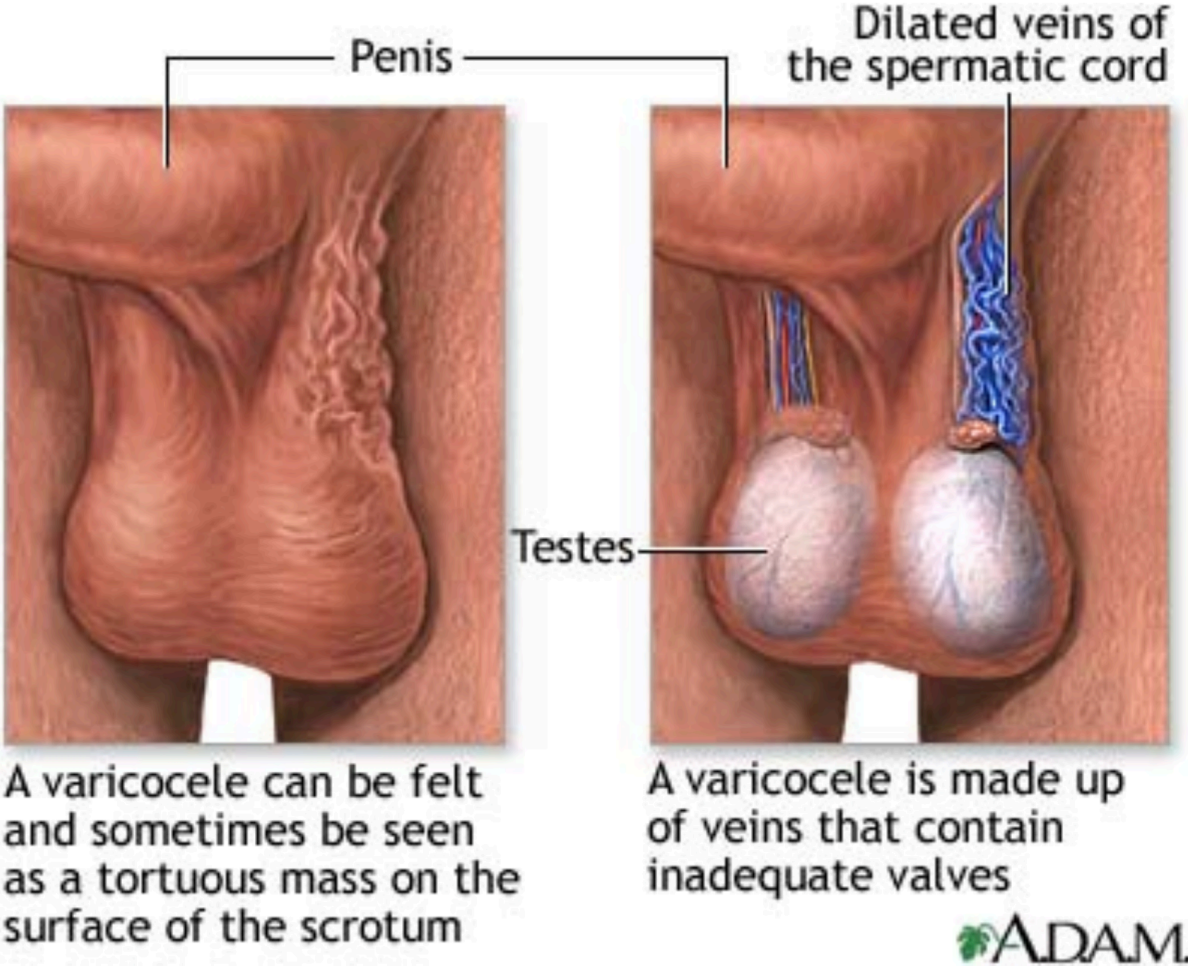


Figure 2: Sketch: the pampiniform plexus. URL https://en.wikipedia.org/wiki/Varicocele#/media/File:Gray1147.png

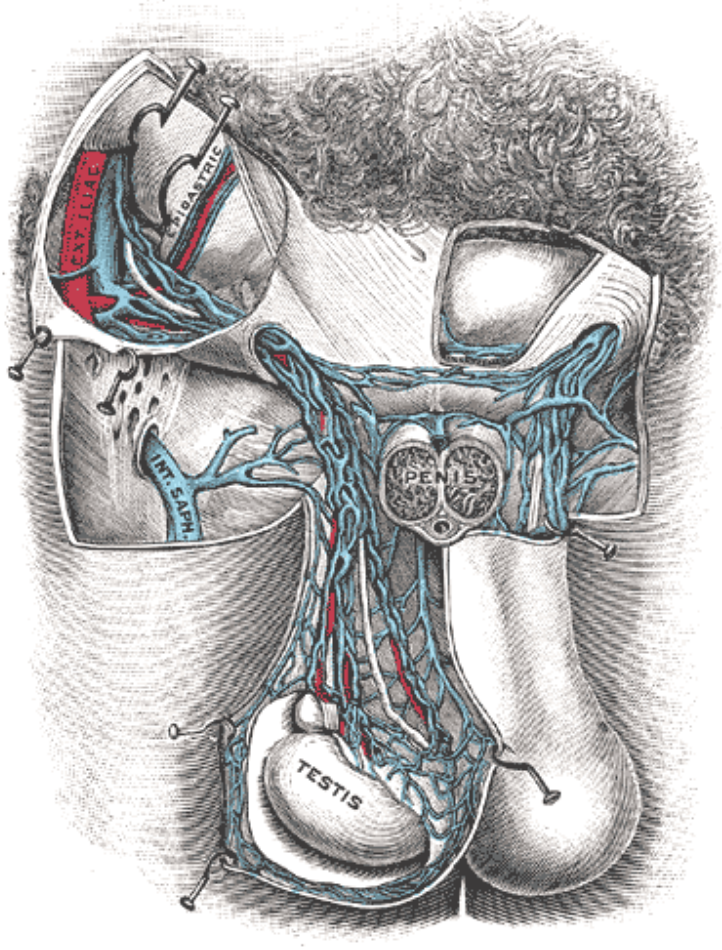


Figure 3: The *pampiniform* plexus. From *Complete Anatomy*. URL https://3d4medical.com/.

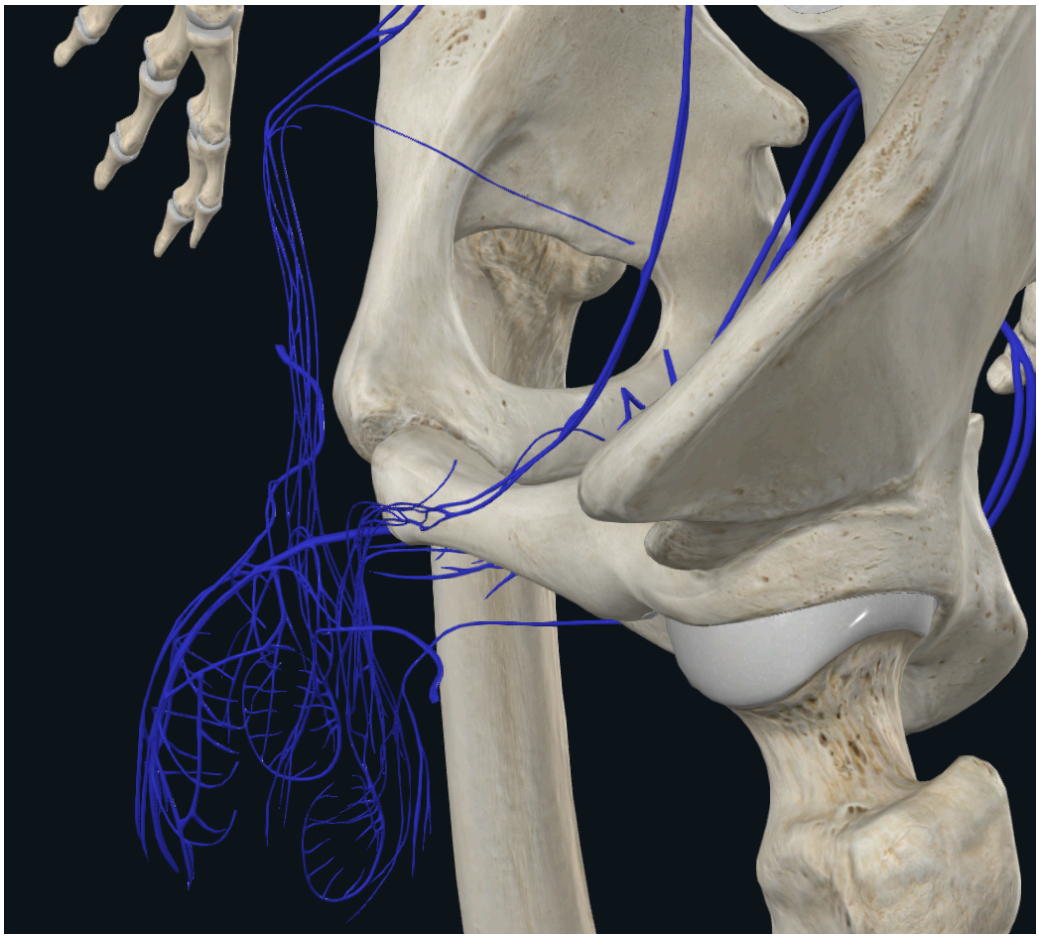
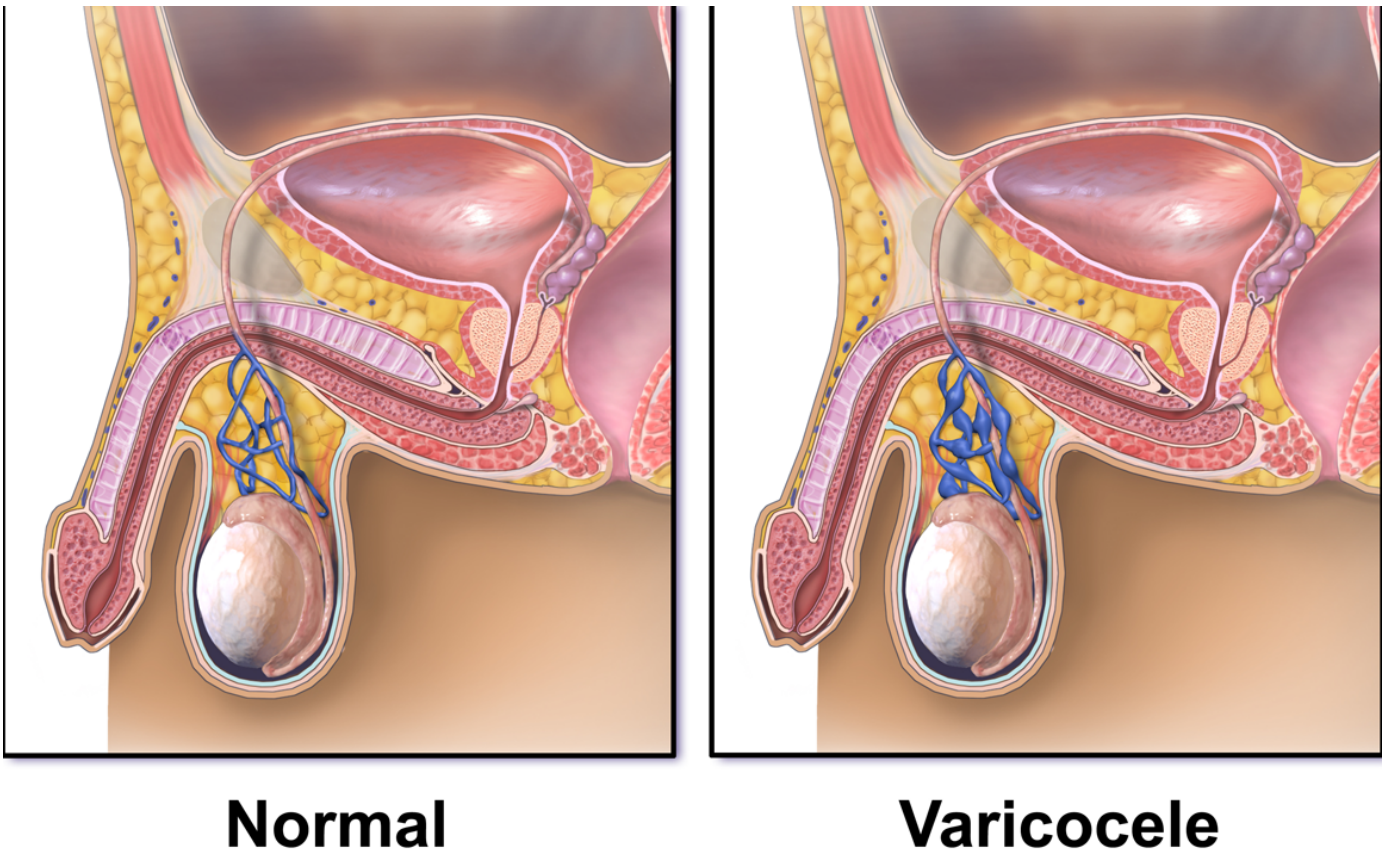


Figure 4: Comparative views. From URL https://en.wikipedia.org/wiki/Varicocele#/media/File:Gray1147.png.



The chiropractic perspective

An ilium subluxation is a Chiropractic term used to describe a pelvic misalignment that creates SIJ dysfunction (abnormal movement patterns), and irritation of surrounding neural structures. A patient may display various symptom patterns depending on the nerve branches that are irritated. Chiropractors are trained to detect these spinal lesions and to understand the associated neurological effects that lead to these varying symptom patterns.

There is a paucity of medical literature that supports the link between spinal joint dysfunction and concomitant visceral symptoms.

Case History

The following is an historical account of the presenting complaint as provided by the patient:

> 'In October 2011, I noticed a pain in my left hip (piriformis area) when I bent forward to plant seedlings. I had been planting seedlings for several months without any problem, when the pain arose.
>
> 'The pain was very minor at first (3/10) and I continued planting for a couple of weeks, learning to cope with the "twinge" it would cause every time I bent down".
>
> 'I figured it was just an overuse injury and I started stretching out my piriformis and hamstrings as much as I could.
>
> 'Around 6 weeks later, I noted that my left testicle began to ache. It felt heavy, like it was being pulled or squeezed, and the pain worsened over the next week.
>
> 'I visited a GP and he examined my scrotum. He said there could be many reasons for scrotal pain and he asked me to have an ultrasound. The ultrasound revealed a "minor varicocele". The GP told me that a varicocele is formed when blood can not return from the scrotum to the heart efficiently, usually because a vein is being compressed between the scrotum and the heart. He said to wait and see whether the pain was manageable.
>
> 'My condition steadily worsened and I returned to the GP another couple of times. I had blood tests to rule out cancer and a urine test which came back with microscopic blood. The GP prescribed antibiotics to treat suspected epididymitis, however I did not improve. After several visits to the GP, and several blood and urine tests, I still did not have a diagnosis. I asked for a referral to an urologist.
>
> 'The urologist did a quick examination and confirmed the presence of a "major" varicocele. He said surgery was an option if the pain was unmanageable but, as he was going on holidays for three weeks, he suggested I get another ultrasound to rule out a hernia. I went to get another ultrasound. The ultrasound confirmed the varicocele and identified a non-bulging very minor hernia (that I have had for years). They also found a 4mm kidney stone in the lower left pole of my left kidney. I went home and drank copious amounts of lemon juice and apple cider vinegar to dissolve the kidney stone.
>
> 'My condition worsened, and I was unable to work. I went to the Emergency Room one night as it was afterhours and I felt very ill. They performed blood and urine tests and found microscopic blood in my urine. They did a CT scan of my kidneys and found flecks of calcium but no stone. They said my blood was not showing any signs of infection, and they were unable to explain my persistent scrotal pain. This started to make me suspect that I had a musculoskeletal problem.
>
> 'I went to the second urologist, and explained that I needed a thorough examination as it had been two months of constant scrotal pain and I was unable to sleep properly. He performed a very thorough examination and confirmed three problems:
>
> 1. a severe varicocele
> 2. epididymitis (chemical infection), and

3. damaged tendon on the back of my pelvis.

'He said the epididymitis infection was not picked up by the hospital because it was a chemical infection, not a viral infection. He said it normally happens when a small amount of urine is forced from the bladder to the testicle due to exertion, and that the infection is very difficult to get rid of. He prescribed me some super strong antibiotics (*fluoroquinolones*) for the chemical infection, and some strong anti- inflammatories (*Celebrex*). He then said he believed the damaged tendon may be referring pain to my hip area (piriformis) and to the scrotum. He referred me to a musculo-skeletal specialist for some cortisone/anaesthetic shots as it was a quick way of getting pain relief and confirming whether the pain was being referred by the tendon on the back of the pelvis".

'I saw the musculoskeletal specialist. He confirmed that I had a damaged tendon on the rear of my pelvis (left side) which was probably an overuse injury. He also confirmed a damaged tendon/ muscle on the front of my pelvis. He gave me cortisone/anaesthetic shots in my lower back and in my inguinal area on the front. Within 30 seconds, 90% of my scrotal and hip pain was gone. He said that this confirmed that my problem was mostly from tight and damaged tendons and muscles.

'About a week later I felt even more ill (possibly a reaction to the antibiotics and pain killers) and I returned to the emergency room. I was very disorientated and dizzy. The hospital performed a CT scan on my brain and confirmed that everything was ok. They had no explanation for my condition and suggested that I had a very bad reaction to the *fluoroquinolones* and *Celebrex*. I stopped all medications at that point and was still bedridden.

'The scrotal and hip pain returned as the cortisone/anaesthetic wore off. I noticed that the varicocele was bulging badly just prior to passing a bowel motion and that it was bad when I am sitting or lying down. I kept coming back to the fact that the pain STARTED in my hip, and that it might be the key to finding out what was wrong.

'The thought of seeing my chiropractor had crossed my mind over the three months, however I knew that I had the chemical infection and I thought it was the largest issue. However, my varicocele persisted and I noticed that I felt lightheaded for a lot of the time. I did my own research and found that long term pain can cause low blood pressure as a body response and that sleep deprivation and stress could also play a big factor'.

It was at that point the patient sought a Chiropractic opinion.

Clinical Findings/Assessments

The patient presented with a right pelvic tilt, flattening of the left buttock, and a noticeable limp on the left leg when walking. I took his word for the presence of a varicocele and avoided palpating his scrotum on the basis he had previously been assessed by experts.

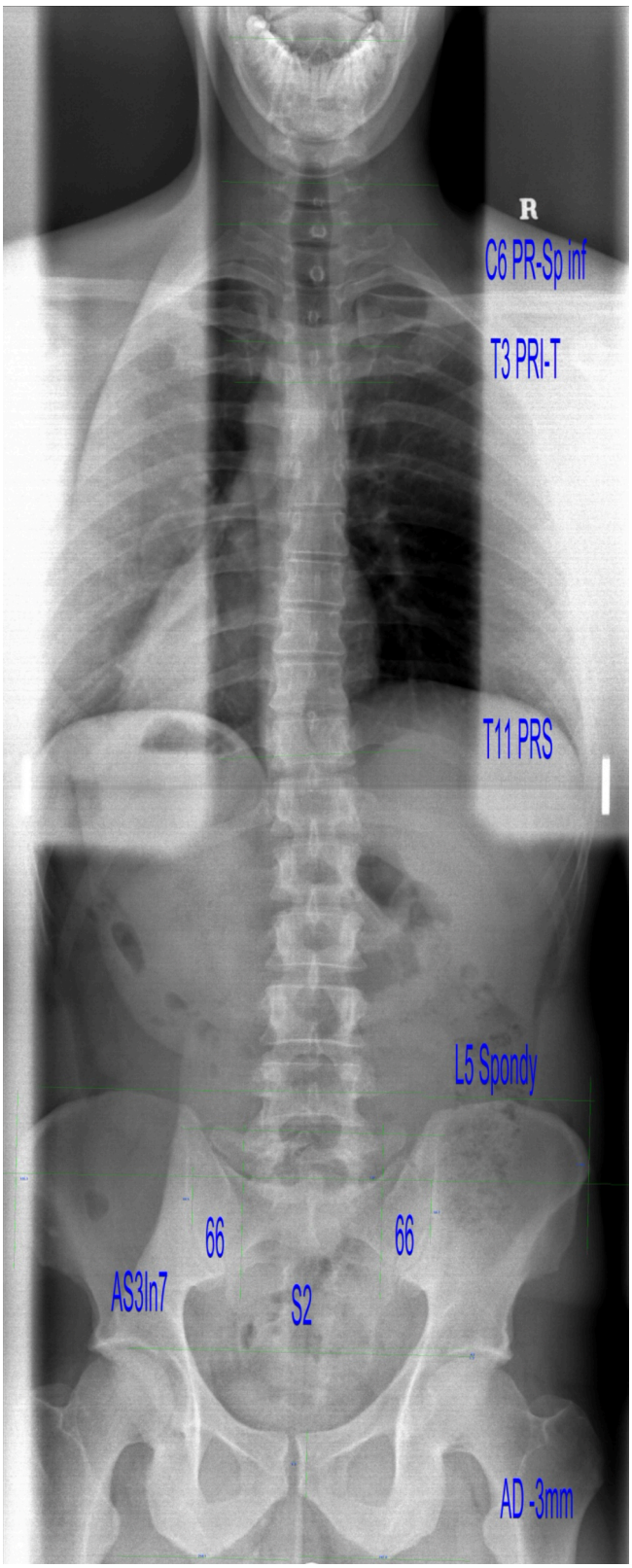
Motion palpation revealed fixation in the left sacroiliac joint with both standing knee raise and seated palpation procedures. Point tenderness to digital palpation was noted in the left lower pole of the SIJ, and over the second sacral tubercle.

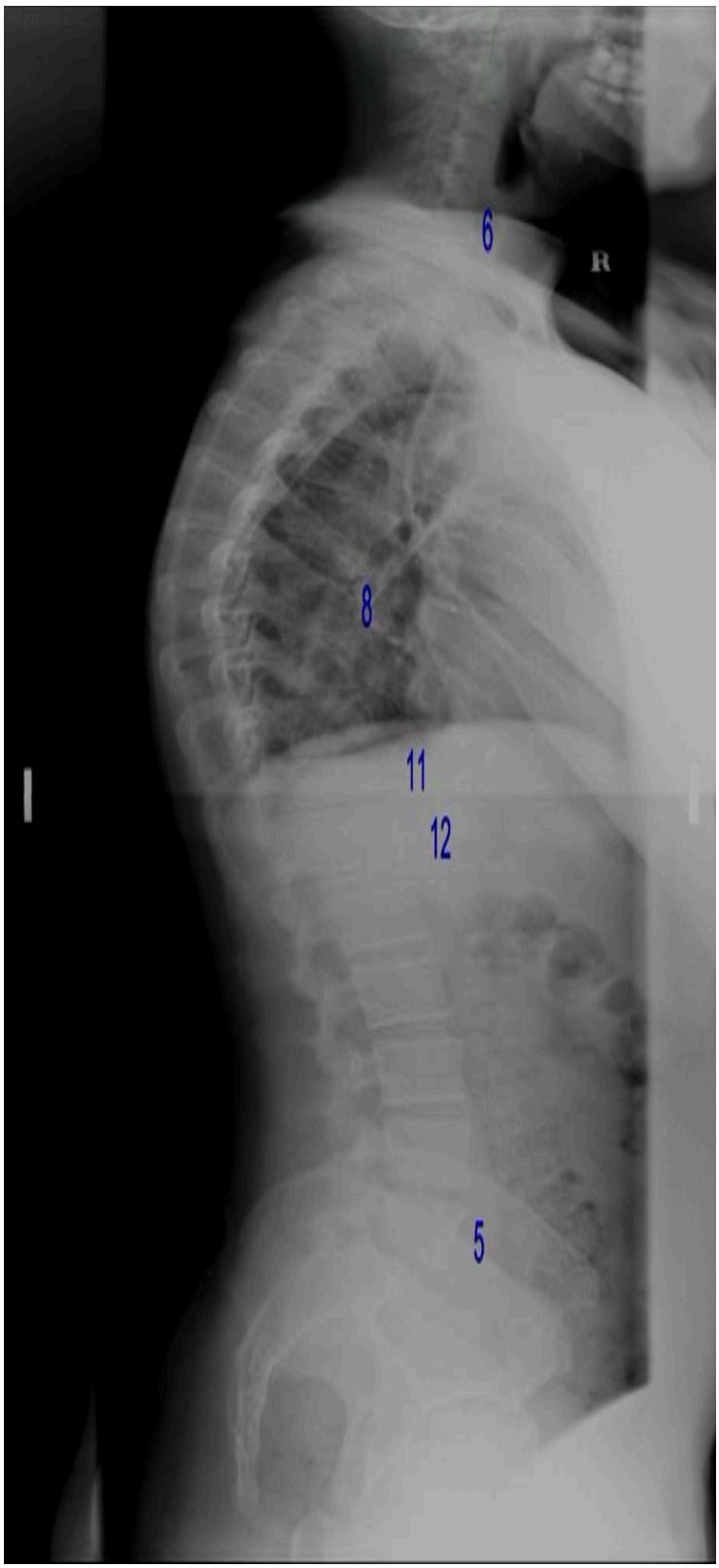
No characteristic reading or '*break*' was elicited from the nervoscope, but a heat swing towards the left SIJ was recorded. Painful myofascial trigger points were found in the left medial gluteal/ piriformis and left iliopsoas muscles. Cough and valsalva manoeuvres increased the scrotal pain.

Radiographic Examination

A full spine series of x-rays were taken in the weight-bearing position in accordance with Gonstead Chiropractic radiographic protocols for x-ray positioning.

The patient's full spine x-rays are given. As these are standard views presented in a professional *Journal* for chiropractors, no further notation is needed:





Chiropractic Diagnosis

Based on the clinical and historical findings, a working diagnosis of a primary left sacroiliac subluxation with concomitant left groin complications was made. It was agreed with the patient to commence a course of treatment to resolve his back pain and monitor its effects on the groin/ scrotum issues.

Treatment

The patient was seen 7 times over a 4-week period. The initial adjustment was delivered to the S2 segment, while all subsequent adjustments were delivered to the left ilium. All adjustments were done using the Gonstead pelvic bench push move. Audible sets were achieved with each adjustment.

Results

Following the first adjustment to the sacrum, the patient reported felling more mobility in his lower back, but no change to his varicocele. The second visit revealed that the tenderness over the S2 tubercle had resolved, and the primary subluxation was deemed to be the left ilium, supported by static and motion palpation findings.

The first setting on the left ilium was difficult, with a small audible movement achieved. That night, the patient reported a reduction in the size of the varicocele while urinating, and that the *pampiniform plexus* was not visible at all (it had apparently been slightly bulging for years and was considered to be normal by the patient). The *varicocele* had returned by the next morning, but this was the first change the patient had noted with any previous treatment he had received.

Over the following 5 adjustments to the left ilium, there were continued subjective improvements in back pain, scrotal pain and longer lasting reduction of the *varicocele*. Objectively, the left ilium regained normal motion, the quality of the setting improved, and all tenderness on the left SIJ resolved. The patient reported the return of the *varicocele* only at the time of a bowel motion, but it then resolved spontaneously soon after. There was no residual pooling of blood or scrotal pain after the last adjustment. With each successive adjustment, the patient reported that the *varicocele* took longer to reappear, and its severity reduced with each visit. The varicocele was no longer noticeable in everyday life.

The patient was then referred to a local physiotherapist for remedial work on his *psoas* area and strengthening/reactivation of his pelvic floor musculature. The patient reports stretching and reactivation exercises have helped his recovery.

The author followed up with this patient at the time of writing the article. This report was written 9 months since the patient last presented for treatment for this matter, and there has been no reoccurrence of symptoms. Occasionally the patient notices a bulge in the upper scrotum if the lower abdominals or pelvic floor muscles are engaged. Some enlargement of the *pampiniform* vessels is expected to remain once a *varicocele* has been diagnosed.

Discussion

Gonstead Chiropractic adjustments were the only treatment that caused a long term shift in the patient's condition. The urologists and musculoskeletal specialist were unable to confirm the link between a low back condition and the varicocele until cortisone was injected into the left SIJ.

Chiropractic offered a more holistic approach to the problem and brought almost immediate results. There is very little literature or information available on the benefit of Chiropractic care in these cases and the link should be investigated given that thousands of people receive expensive varicocele surgery or the less invasive embolisation technique. (1)

Idiopathic *varicoceles* develop slowly and may not have any symptoms. They are most frequently diagnosed when a patient is 15-30 years of age, and rarely develop after the age of 40. They occur in 15-20% of all males, and in 40% of infertile males.

98% of idiopathic *varicoceles* occur on the left side, apparently because the left *testicular vein* connects to the renal vein (and does so at a 90-degree angle), while the right *testicular vein* drains at less than 90-degrees directly into the significantly larger *inferior vena cava*. Isolated right sided *varicoceles* are rare.

A secondary *varicocele* is due to compression of the venous drainage of the testicle. A pelvic or abdominal malignancy like renal cell carcinoma is one differential in males over 40 years of age. One non-malignant cause of a secondary varicocele is the so-called '*Nutcracker syndrome*', a condition in

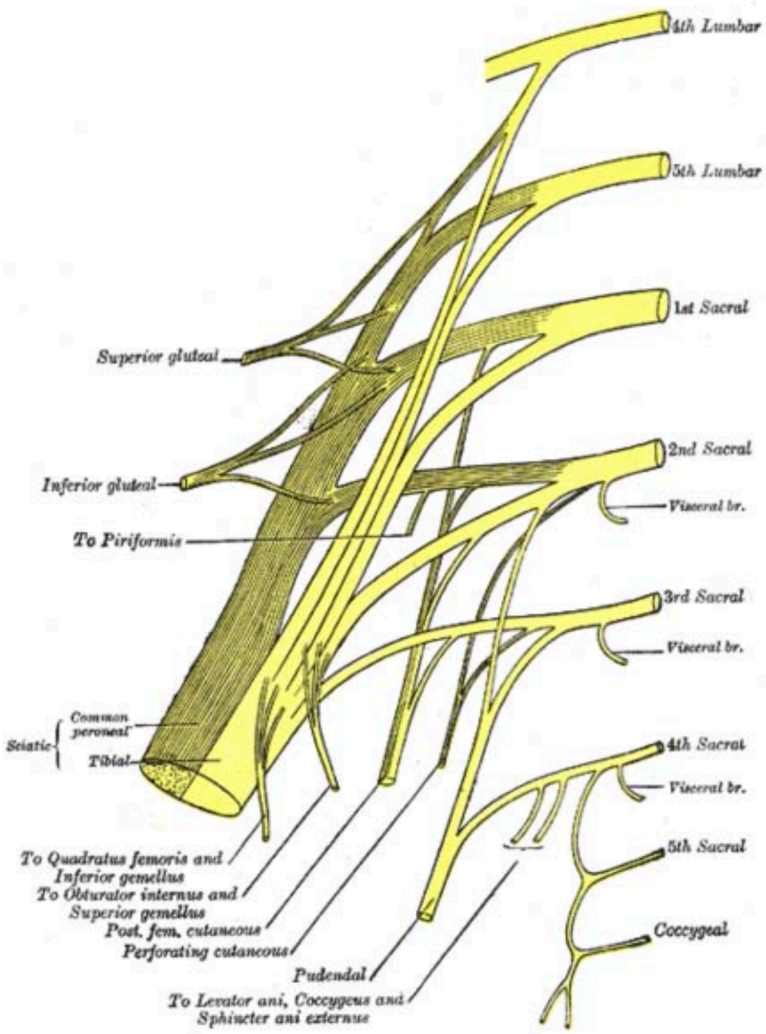
which the superior mesenteric artery compresses the left renal vein, causing increased pressures there to be transmitted retrograde into the left *pampiniform* plexus. (4)

I suggest that a non-malignant cause of secondary *varicocele* could be mechanical torsion and elongation of the *pampiniform* vessels when the ilium rotates internally around the body's Y axis. The *spermatic cord*, vessels and *vas deferens* enter the scrotum through the aponeurosis of the *external oblique* muscle, the In ilium misalignment potentially creates torsion on these structures, increasing the likelihood of compression and insufficiency. This mechanical compression would be relieved with correction of the ilium misalignment.

The pelvic subluxation has been well documented in previous case reports and at Chiropractic seminars (6) to influence the sacral plexus (Figure 5). The scrotum and testicles are innervated by the *ilioinguinal* and *lumboinguinal* branches of the *lumbar* plexus, the two *superficial perineal* branches of the *internal pudendal* nerve, and the pudendal branch of the *posterior femoral cutaneous* nerve originating in the sacral plexus.

Irritation of nerve afferents can affect the distribution of pain syndromes, in this case the S2-4 nerve roots and their resultant branches. Aberrant firing of these nerve branches is normalised when the subluxation is corrected with a Chiropractic adjustment.

Figure 5: Sacral Plexus showing origin of inguinal and reproductive nerve supply (5).



Conclusion

This case report demonstrates the association between spinal joint dysfunction and concomitant visceral dysfunction. In this patient, a primary ilium subluxation caused by repetitive strain trauma was deemed the cause for the formation of a secondary *varicocele*.

Specific Chiropractic adjustments to correct the pelvic misalignment resulted in the resolution of the *varicocele* and its symptoms. This demonstrates a direct link between spinal joint dysfunction and visceral symptoms.

Further case reports of these findings demonstrating positive outcomes would add validity to Chiropractic as a non-invasive treatment option.

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About

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