Resolution of Vulvodynia Following Chiropractic Care Using Chiropractic Biophysics & Diversified Techniques: A Case Report

Abstract

**Objective:** This case report describes the conservative management of a female complaining of vaginal pain that is radiating to her low back. The explanation of how chiropractic adjustments can be beneficial to someone suffering from vulvodynia will also be addressed.

**Clinical Features:** A 50-year-old female patient presented with pain involving the internal and external vaginal organs. Various medical specialists prior to chiropractic were unable to determine neither the cause of her pain nor its origin.

**Intervention & Outcomes:** Chiropractic Biophysics Analysis and adjusting methods were administered to remove subluxation indicators throughout her spine. Diversified Technique uses contact-specific, high-velocity, low-amplitude thrusts to deliver an adjustment. The patient reported having a decrease in intra-vaginal and extra-vaginal pain after chiropractic care.

**Conclusion:** The results from this case study demonstrate the possibility of chiropractic care having a significant beneficial impact on vulvodynia. Resolution of the patient’s symptoms was obtained along with objective findings showing a decrease in subluxation indicators. The locations of the subluxations are possibly responsible for the originating cause of vaginal pain known as vulvodynia.

**Key Words:** Vulvodynia, vestibulodynia, dyspareunia, chiropractic, vaginal pain, subluxation, CBP Technique, adjustment, spinal manipulation

Vulvodynia refers to unprovoked pain in the area of the vulva. The pain sensation(s) that someone may encounter could be stinging, burning or irritation. At times it is even described as rawness. Localized vulvodynia known as “vestibulodynia” refers to pain that is provoked by touching the vestibule. This can happen with the first experience of a tampon, speculum or sexual activity. Delayed onset may also occur. This happens when pain develops after a period of comfortable sexual activity.

Dyspareunia, or pain with sexual intercourse, is also associated with vulvodynia but it does not always occur. The leading cause of dyspareunia under the age of 50 is vulvodynia. Urogenital atrophy is the most common cause of dyspareunia in women who are approaching menopause and are in menopause.

It is rare for women to discuss the complaint of vaginal pain with their healthcare provider. A study from Sweden reported that only 28 percent of women with a history of prolonged and severe pain with sex sought help from a physician. Over the course of one year in the United States, it is known that as many as 1 in 20 (5%) women may experience new-onset chronic genitalia pain.

Vulvodynia has an estimated prevalence of 9 to 12%. Fifteen percent of women seen in a generalist practitioner’s office reported having pain in the area of the vulvar vestibule when palpated. The condition includes Caucasians, African Americans, Africans and Hispanic women, especially those who are also sexually active. Most women who present with...
Vulvodynia or symptoms of the disorder are between the ages of 18 and 80 years old. Several causes have been proposed for the condition known as vulvodynia. These causes include embryologic abnormalities, increased urinary oxalates, genetic or immune factors, hormonal factors, inflammation, infection and neuropathic changes. Most clinicians involved with the treatment of this condition usually start with non-invasive therapies and gradually proceed to more aggressive therapies.

The initial medical approach starts with the avoidance of all skin and mucosal irritants like soap, perfumes and deodorants. Common recommendations also include wearing cotton underwear in the day time and none at night. Treatment may then progress to topical, oral and injectable medications; biofeedback; physical therapy; diet and surgery. It is also advised to limit the amount of oxalates and simple carbohydrates in one’s diet. Oral supplementation of calcium citrate is usually recommended.

Chiropractic care is a type of non-invasive treatment path to follow for this problem. This appears to be a path that not many choose. One could speculate that it is because of a lack of existing research on the topic. Chiropractic focuses on restoring neuromuscular biomechanics through a mechanism that involves adjustment to the spine and its parts to allow optimal function and expression of the nervous system. To our knowledge, no study has yet described the effects of chiropractic adjustments causing reduction of vulvodynia.

The intention of this study is to describe the experience of a 50-year-old female suffering from vulvodynia. After multiple, concurrent laboratory examinations by medical doctors failed to reveal any indication as to the cause of her problem, the patient sought help from a doctor of chiropractic.

**Selected Review of Literature**

Vulvodynia has many possible treatments. Very few controlled trials have been performed to prove the efficacy of such treatments. The most recent classification of vulvar pain is described by the International Society for the Study of Vulvovaginal Disease (ISSVD). They define vulvodynia as “vulvar discomfort, which is most often described as burning pain, occurring in the absence of relevant visible findings or a specific, clinically identifiable neurologic disorder.” The classification of vulvodynia is based on a variety of factors. These factors include the specific site of pain and whether it is generalized or localized pain. Provoked, unprovoked, or mixed pain may also play a role in the equation.

Patient history will allow the examiner to properly identify the duration of pain, previous treatments, allergies, past medical history, surgical history and sexual history. Vaginal pH, fungal and gram stains are performed as required during a vaginal exam based on symptomatology and patient presentation.

Topical ointment for the vulva may be helpful. The most commonly prescribed topical medications are lidocaine ointment 5%, plain petroleum and estrogen. Capsaicin is used to treat neuropathic pain. The use of topical nitroglycerin has also been reported to temporarily improve vulvar pain and dyspareunia.

Topical therapies not shown to benefit vulvodynia include topical corticosteroids, topical testosterone and topical antifungal medications.

Physical therapy techniques may also be used. These therapies include internal (vaginal and rectal) and external soft tissue mobilization and myofascial release; trigger point pressure; visceral, urogenital and joint manipulation; electrical stimulation; therapeutic exercises; active pelvic floor retraining; biofeedback; bladder and bowel retraining; dietary revisions; therapeutic ultrasound; and home vaginal dilation.

Cognitive-behavioral therapy (CBT) and supportive psychotherapy (SPT) are two additional types of therapy known to yield beneficial outcomes in women suffering from vulvodynia. CBT involves the learning and application of specific pain-management and coping skills. SPT is a non-behavioral approach centered on talk-therapy that teaches patients to express their feelings verbally. A randomized clinical control trial that had 50 female participants showed that there were clear advantages of CBT over SPT. CBT techniques yielded a significant reduction in patient pain and greater patient satisfaction.

Many doctors have formed a consensus that rapid resolution of symptomatic vulvar pain is unusual even with appropriate therapy. Improvement of pain may take weeks to months. It is also known that no single treatment is successful in all women. Emotional and psychological support can be and most often is invaluable.

**Case Report**

**Patient History**

The patient is 50-year-old female treated by a chiropractor for complaints of internal and external vaginal pain and discomfort. The pain has radiating sensations to the low back. She states that she does child-care for a living, but has no children of her own. The patient denies having any sexually transmitted diseases (STD’s). She does not take any medications, nor does she have any allergies that she is aware of. The patient has had the complaint of vaginal pain for the past 11 months with a sudden onset. The pain is constant and never ceases.

Before the patient came into the chiropractic office, she had visited a variety of medical doctors. These doctors ranged from general primary care practitioners to gynecologists. Those medical specialists performed an array of diagnostic exams in an effort to identify the cause of the pain.

Some of the exams that were conducted included CT scans of the head, pelvis and legs. Several cultures were taken from the patient’s vagina (including swabs for sexually transmitted diseases) and ultrasounds were done on her veins. The outcomes of those studies all came back negative and the gynecological examination was unremarkable. Immediately prior the patient’s initial visit to the chiropractic office, one of her medical doctors stated that he wanted her to try vaginal therapy.

Vaginal therapy as explained to her by the medical doctor
meant that the doctor would insert and extract his fist from her vaginal orifice a number of times in an attempt to regain elasticity. The patient was opposed to that idea and articulated her disappointment at having spent thousands of dollars and wasted countless hours waiting for the cause of her pain to be properly identified but without an answer.

In addition to the slew of inconclusive medical tests, the patient also reported that her vaginal pain was beginning to have a negative effect on her marital relationship. She claims to have had a rather happy and satisfying marriage until the vaginal pain started, but since its onset she had been unable to have sexual intercourse due to the amount of pain in and around her vagina.

The patient expressed that the use of topical lubricants did not allow any additional comfort during times of sexual activity. She described one day being emotionally draining because her husband asked her why she was so upset. Her answer was, “you have no idea how it feels to constantly be hurting like that; especially in that area of your body”. The patient sought chiropractic care as a last resort.

**Chiropractic Examination**

Due to the area of her chief complaint, no physical exam would be performed by the chiropractor to address that region. This is because it is out of the scope of chiropractic. It was stated by the chiropractor to the patient that he would only be able to assess her for vertebral subluxations. Subluxations are misalignments in the spine that result from poor musculoskeletal biomechanics and have an inhibitory effect on nervous system function. The exams that were conducted were used to identify and locate the patient’s subluxations.

Static palpation revealed extreme restriction and hypertonic musculature from the first lumbar spinal segment to the first sacral segment (L1-S1). The most restricted segment on static palpation was L3-L4. Motion palpation of the spine was performed on the lumbar spine and it was concluded that the third lumbar (L3) was the most fixated.

Spinal x-rays were also taken on this patient using Chiropractic Biophysics Analysis (Fig.3). These X-rays were taken on the patient’s first visit, and analysis was conducted via Posture Ray System. This system uses computerized measurements to evaluate spinal alignment. This system is both accurate and precise. Inter-segmental angles and global angles are measured. Identification of any ligament damage is also possible. The analysis of the lumbar spine showed that L3-L4 had the largest difference from normal where subluxation indicators were present. (Fig. 4). This is defined in terms of segmental positioning when compared to the other segments that had subluxation indicators. 0% is representative of normal. The segments L3-L4 had 73.3% deviation from normal.

Paraspinal Thermography was used to identify any fluctuation in the patient’s skin temperature patterns. Paraspinal Thermography scans begin at the base of the sacrum and slowly move up the spine stopping at the second cervical segment (C2). The scan records fluctuations thought to be associated with the sympathetic nervous system innervating the vascular beds of the skin. There are a few reasons why skin temperature changes on a normal basis: skin temperature may rise or fall based on the surrounding temperature; different areas of the body will have disparity in temperature averages due to variation in anatomical structures; the autonomic nervous system maintains homeostasis which regulates body temperature.

Despite all of those explanations, in a healthy individual the thermographical readings should be symmetrical from one side of the body to the other. Temperature changes that are seen in properly-performed scans are usually due to physiological changes as opposed to equipment or technical error. The initial scan done on the patient showed skin temperature fluctuation was most severe at L5, T10 and T8. She had an intermediate rating at +2. All fluctuations were on the right side of the spinal column. (Fig. 1-B).

Surface electromyography (SEMG) was also assessed during the initial exam. SEMG requires hand-held electrodes that are placed on the skin overlying the muscles to be evaluated. Normally 15 different paraspinal locations are used. These sites include four cervical, seven thoracic, three lumbar and one sacral region. Different regions of the spine will create different magnitudes of signal due to the differences in anatomy.

An individual’s neurophysiological reactions may create aberrant patterns due to environmental events, bodily sensations and emotional stresses. These affected muscle(s) may show related activity that can be evaluated using surface electrode techniques. The initial scan on the patient demonstrated amplitude readings that were off the charts at L5 and L3 bilaterally. This would be a +4 rating (not shown in fig.) (see Fig. 1-A).

**Chiropractic Care & Outcome**

Diversified Technique uses a specific contact, high-velocity, low-amplitude adjustment. This technique usually requires the patient to be in a prone or supine position to receive the adjustment(s). Lines of drive to be used by the doctor must be specific so the adjustments that are given will correct any mechanical distortions in that region of the spinal column. The primary adjustment that was given was to reduce the subluxation indicators present at L3.

The body of the third lumbar was rotated to the right (spinous process left) in comparison to the vertebral segments above and below. This gives the chiropractic listing of PL. The “P” means that the segment has moved posterior. The “L” means spinous has rotated to the left. The reference for this listing is visualized from posterior to anterior. All clinical exam findings were showing that the L3 spinal segment was the primary subluxated segment.

The PL listing located at L3 was the area of most concern for the patient’s initial and follow up visits. She was adjusted three times per week throughout the first month of care. After the first two weeks the patient told the chiropractor that she was beginning to notice that the pain in her vaginal area was less severe and decreasing in frequency. The patient was elated with the results and care she was receiving.
The patient had a reassessment after one month of chiropractic care had been administered. Spinal analysis showed improvement at L3-L4 spinal segments. The initial exam showed 73.3% deviation from normal, but thirty days following L3-L4 only had a 5.6% deviation from normal. This is a 67.7% improvement in 30 days (Fig.5). Also note the x-rays that were taken almost one year after the initial exam (Fig. 3).

Spinal thermography and SEMG scans were also taken during the 30 day reassessment. The first thermography scan showed that L5, T10 and T8 all had an intermediate rating of +2 (all were on the right). The reassessment thermography scan demonstrates L5 having the most severe rating of +3 on the right. Segment T10 is represented as normal on the right (0 rating). Segment T8 also has a normal rating of +0 on the left. (Fig. 2-B)

The initial SEMG scans demonstrated L5 and L3 as having the most aberrant amplitude readings. The reassessment SEMG readings demonstrates L5 as a +2 rating on the right and a +0 rating on the left. L3 had a +0 rating on the right and a +2 rating on the left. (Fig. 2-A)

The patient is currently continuing with chiropractic treatment and is evaluated with Diversified Technique. Since her initial consultation at the chiropractic office, she has since been asymptomatic of all her vaginal pain and has a healthy sexual relationship with her husband. She is extremely happy with the results and wants other women to know her story.

Discussion

Vulvodynia is most likely a neuropathic pain that arises from abnormal neural activity. Another possible explanation is that vulvodynia may be caused by disease, persistent irritation or injury of the nervous system without previous disease or acute injury. Irritation can happen if the presence of a noxious stimuli occurs for a long period of time, causing biochemical and neuroinflammatory changes to take place in the central nervous system. This process may cause central sensitization. Central sensitization is when pain impulses are intensified and the generation of spontaneous pain impulses ensues. When this happens, normal (typically non-painful) stimuli can be experienced as painful.

It is possible that the process of central sensitization occurs due to improper biomechanics of the human body. If an area of the body has macro or repetitive micro trauma to muscle fibers, muscle nociceptors may begin to sensitize. This would decrease their mechanical threshold. If that were to happen, muscle hyperalgesia, mechanical allodynia, and peripheral sensitization may result. This would be possible because of inflammatory mediators such as bradykinin, serotonin, prostaglandins, adenosine triphosphate and histamine would be released.

If chiropractic adjustments are capable of restoring proper musculoskeletal biomechanics, then stress on the nervous system should therefore be reduced. If this is true, then it is possible that a noxious stimulus will no longer be perceived as noxious. Normal stimuli is no longer painful.

Women who suffer from vulvodynia utilized the healthcare system at a rate of only 50% in the last year. Some of the strongest predictors for this disease are chronic yeast infections and urinary tract infections. Chronic pelvic pain (CPP) is placing a substantial burden on our healthcare system each year. More than $880 million dollars is spent each year on CPP. 

Research has shown that there is a lack of quality data regarding the treatment of vulvodynia. Treatment is largely based on few randomized trials, observational studies, case reports and clinical experience. Most often treatment consists of patient education, behavior modification, emotional support, medications and others.

Conclusion

Chiropractors have the ability to provide beneficial, non-invasive care to the public with low risk. They treat patients in an integrated manner regardless of the cause of their condition. In this case study, chiropractic treatment was successful in removing subluxation indicators as well as providing vaginal pain relief to the patient. Diversified and CBP Technique protocols were used in this study. These results may be refutable due to a small sample and lack of a control group present in the study. Further extensive studies exploring the correlation between vulvodynia and subluxations are required.

References

Figures

Fig. 1-A and 1-B represent the initial SEMG scan and Thermography scan respectively. The most significant finding is L5 and L3 on the SEMG scan. L5, T10, and T8 on the Thermal scan are notable as well. Please note that C1 is an outlier.

Fig. 2-A and 2-B represent the follow up examination for the SEMG and Thermography scans. Note the significant difference of improvement at L5 and L3 on the SEMG scan. Also note that bodily adaptive changes are being made as shown on the Thermography scan.
Figure 3. The x-ray located above on the left was taken during initial exam. These are lateral lumbar projections. The x-ray on the right hand side was taken at approx. one year of care. The green line indicates a normal curve, while the red line indicates the actual curve of her lumbar spine. The tables above represent the changes that were made to her spine.
Figure 4. This figure represents the difference from normal during the initial exam. Note findings at L3-L4.

Figure 5 represents a follow up examination. Note the improvement in segment L3-L4 compared to the initial exam. Difference from normal was decreased.