CASE STUDY

Resolution of Infertility Following Subluxation Centered Chiropractic Care: A Case Study and Selective Review of Literature

Chaz Ebert, DC[1] & Pete Brettingen, DC[2]

Abstract

Objective: To describe the results following chiropractic for a female who experienced difficulty conceiving a child, and to provide a current review of the literature on infertility and chiropractic.

Clinical Features: A 29-year-old female presented to a chiropractic clinic with a 3-year history of infertility. She had not been to a chiropractor previously, had failed attempts with intrauterine insemination and in vitro fertilization and had been taking estrogen modulators for a 5-month span.

Interventions and Outcomes: Vertebral subluxations were found at different segments in the spine according to the Torque Release Technique. Adjustments were made using a hand held adjusting instrument (Integrator) at sites of vertebral subluxations. After 16 weeks of care, she reported being pregnant.

Conclusion: Chiropractic adjustments to vertebral subluxations were shown to be beneficial for a woman struggling with conceiving a child. More research is required in this area to explore links between infertility and vertebral subluxation.

Keywords: *Chiropractic, infertility, subluxation, adjustment, Torque Release Technique, TRT, pregnancy, fertility*

Introduction

In the United States of America between 10-15% of couples experience difficulty becoming pregnant or carrying the baby to term.[1] Infertility is defined as the failure to achieve a pregnancy within one year of regular unprotected intercourse.[2] As females age the likelihood of experiencing infertility rises. While 11% women between the ages of 15-29 experience failure to achieve pregnancy within one year, women ages 35-39 experience this at a rate of 23%.[3] In a study conducted in 2002 researchers surveyed over 700 couples, aging from 19 to 39. The study found that fertility starts declining after age 27 and at the age of 35 drops at a much higher rate. The women were divided into four age groups: 19–26, 27–29, 30–34 and 35–39. Pregnancy rates did not change notably between the 27–29 age group and the 30–34 age group, but dropped significantly for the 35-39 age group.[4] This inability to conceive can cause much stress and anxiety for the family. It has been estimated that 9.3 million women have sought out treatment for infertility, with the majority of those 9.3 million seeking conventional medical treatment.[5] Conventional treatment of infertility has many direct and indirect costs. The direct costs of utilizing conventional infertility treatments vary greatly by country however the United States stands out as the most expensive. The cost of each birth can exceed $50,000 dollars. While the indirect costs include an increased incidence of multiple birth pregnancies, less favorable infant outcomes and increased long term health problems with the children.[6]

1. Private Practice of Chiropractic, Watkinsville, GA
2. Private Practice of Chiropractic, Chaska, MN

There are three objectives of this paper. The first is to review the current research relating infertility to chiropractic. The second objective is to detail chiropractic care in the case of a 29-year-old female struggling with infertility. The third objective is to contribute to the encouragement of further research relating to this issue. This paper will help show the relationship between subluxation based chiropractic care and the improvement of quality of life patients often experience. This paper will also explain the effects the vertebral subluxation has on the human body.

Case Report

History

A 29-year-old female presents with a three-year history of infertility. She had previously been taking the estrogen modulator, clomiphene citrate (Clomid) for a five-month period. She had also attempted in vitro fertilization and intrauterine insemination all with no success of conception. She had been in a major car accident five years previous and reported experiencing 3-4 headaches per week.

Examination

Physical examination of the patient revealed the following results. The initial exam consisted of thermography, X-rays and a chiropractic exam. Paraspinal thermography was utilized using the Titronics Tytron thermography unit. In a 2004 study this equipment was shown to have very high intraexaminer and interexaminer reliability.[7] This technology records thermal deviations along the spine related to increased or decreased blood flow. When deviations are detected this shows dysfunction in relation to the neuromusculoskeletal system.[8] This was recorded from S1 to L1 and from T1 to C1. Initial scans showed thermal deviations of over 0.5 degrees Celsius at C1, L4 and S1. Deviations between 0.3-0.5 degrees Celsius were found at C2, L3 and L5.

Radiographic images were taken of the lumbar and cervical regions, including an AP lower cervical, AP open mouth, lateral cervical, lateral lumbar and an AP lumbopelvic. view. The radiographs were negative for bony pathology, fracture and infection. Soft tissues were also negative for any pathology. The lateral cervical spine radiograph showed a decreased cervical curve measuring at 1-degree. This was determined by drawing the cervical lordosis lines using OPAL-Chiro technology. All images were taken at 40" source image distance.

The chiropractic exam revealed the following results. While performing the functional leg length a right short leg of ¼" was present. There was also evidence of heel tension, supination of the feet and taut fibers in the low back. Cervical ranges of motion were within normal limits. Normal limits would be within five degrees of the following numbers; Flexion (50 degrees), extension (60 degrees), left and right rotation (80 degrees) and left and right lateral flexion (45 degrees).[9] Subluxations utilizing the torque release technique protocol were found at C1, Sacrum and L5.

Intervention and Outcome

The Torque Release technique was utilized with this patient for location of vertebral subluxation. The locations of primary vertebral subluxations were revealed utilizing the 15 indicators of subluxation, to be explained further in the mechanism section. Adjustments were made using an instrument, the Integrator.[10,11] The patient was checked for vertebral subluxations twice a week for two months, approximately 3-5 days apart, per her ability to visit the office.

On the first visit, adjustments were made at the level of C1, S1 and L5 as indicated by the torque release technique protocol. Subsequent visits revealed recurrent subluxations at the C1 and Sacrum levels of the spine. She was compliant with her care plan for two months, receiving three adjustments per visit utilizing the Integrator at levels that were deemed primary subluxations by the TRT protocol. During the course of the two months her complaints of headaches had been resolved, however she had not yet confirmed being pregnant. The adjustment of subluxations occurred for another two months using the same protocol. After which time she had a visit with an obstetrician where an ultrasound was performed confirming her pregnancy. The obstetrician backdated her to being eight weeks gravid. Vertebral subluxations were adjusted throughout the remainder of her pregnancy and she was able to have a successful vaginal birth.

Technique and Mechanism

Chiropractic is based on the philosophical universal premise that an intelligence in all matter continually giving it its properties and actions thus maintaining it in existence. The role of the body is to utilize this universal intelligence and transmit it into an intelligence that the body can use for constructive reasons. If the body cannot transmit universal forces into innate forces, destruction of the body occurs. When the body cannot transmit universal forces into innate forces that is known as a vertebral subluxation.[12] The Association of Chiropractic Colleges defines the subluxation as follows:

> A subluxation is a complex of functional and/or structural and/or pathological articular changes that compromise neural integrity and may influence organ system function and general health. A subluxation is evaluated, diagnosed and managed through the use of chiropractic procedures based on the best available rational and empirical evidence.[13]

This subluxation causes a disconnect between brain and body, thus it is the role of the chiropractor to adjust the spine to allow the body to transmit universal forces into innate forces.[13] Subluxations are due to cord pressure and cord tension. Cord tension occurs from the dura mater attachment sites along the spine. The dura mater attachment sites are located at the Sphenoid, Occiput, C2, C5, Sacrum and Coccyx, with indirect attachments at C1.[11,14]

The Torque Release Technique (TRT) was born from

research to combine the philosophical grounds of chiropractic and the scientific evidence. Dr. Jay Holder created TRT in the early 1990's. TRT was developed from six popular chiropractic techniques.[11]

There are 15 indicators of spinal subluxation. The first being palpation which is assessing for heat or tone differences along the spine. Functional leg length inequality (based on the neurological achilles reflex) allows the practitioner to check for a side of short leg Abductor tendency/adductor resistance will indicate a C2 subluxation on the side of greater resistance. Foot flare indicates anterior rotation of spinal segments with dural attachment. Foot pronation or supination indicates a subluxation of the trochanter. Heel tension will indicate a C2, C5, sacrum or coccyx subluxation. Abnormal breathing patterns that would include short inspirations or expirations, wheezing, asymmetrical rising of the diaphragm would indicate signs of vertebral subluxation. Sustained paraspinal contractions would indicate increased sympathetic tone. Congestive tissue tone and postural faults would indicate presence of subluxation. Cervical syndrome would indicate C1 or C5 subluxations. Bilateral cervical syndrome would indicate an occiput, C1, C5, T6, Sacrum or coccyx subluxation. A Derefield test would indicate a pelvic subluxation. Abnormal heat radiation would indicate abnormal sympathetic tone and a wrong-un test would indicate a C1 subluxation.[10,11,14]

TRT consists of multiple priorities to check the most common places of subluxations. Priority one consists of Coccyx, Sphenoid, Occiput and Sacrum. Priority two consists of C1, C5, Occiput, T6, Sacrum, Coccyx and Sphenoid. Priority three consists of sacrum, ilium, trochanter, & pubic bone. The following priorities consist of checking C2, C7, L3, L5 and other segments of the spine.[10,11,14] Pressure tests are used to determine the exact line of drive and torque.[11]

TRT utilizes an adjusting instrument called the Integrator. The following is an excerpt from the Torque Release Technique Manual about the integrator;

> The Integrator™ is the only chiropractic adjusting instrument that was developed out of randomized clinical trial, blinded and with placebo control. The study was designed by Robert Duncan, Ph. D., bio-statistician, at the University of Miami School of Medicine, together with the Holder Research Institute and founded in part by a grant from the Florida Chiropractic Society. Years of development, testing and design went into creating an instrument that would deliver that 3rd dimensional dynamic that adjusting by hand embraced but that no other instrument in chiropractic delivered; "TORQUE" and "RECOIL". THE INTEGRATOR reproduces the entire thrust and movement components of TOGGLE RECOIL, the classic Chiropractic Method of adjusting by hand at a speed of 1/10,000th of a second.[14]

Discussion

Review of Literature

A literature search in the Index to Chiropractic Literature using the keywords infertility, chiropractic and fertility resulted in 33 articles being found. Many cases were shown to be effective utilizing chiropractic care and infertility, with many different techniques being represented.

Dr. Schwanz and Schwanz described a case of a 29-year-old female schoolteacher with an 8-year history of infertility. She presented with a 2-week history of low back pain and left leg pain, which radiated down to the sole of her foot. She denied the usage of birth control in the past. She stated her menstrual cycle typically lasted between 40-60 days on average. Using the Gonstead Technique adjustments were made to correct vertebral subluxations. The patient was seen once a week, approximately 5-6 days apart. Adjustments were made over the course of four weeks at which time it was reported the patient was pregnant.[15]

In 2008, Dr, Sims detailed the case of a 23-year-old female presenting with infertility, low back pain and amenorrhea. She had been on birth control since she was 17-years-old. A urinalysis and complete blood count was performed by her gynecologist one-month prior, with all returning normal levels. Using Diversified technique she was checked and adjusted for vertebral subluxations. After three and half months the patient started menstruating. After four and half months of care the patient reported testing positive to three over the counter pregnancy tests. A urinalysis was then shown to be positive for HCG and an ultrasound confirmed the results.[16]

Dr. Liz Anderson-Peacock reported the case of two females in their mid thirties who presented with a history of infertility. The 35-year-old female reported a chief complaint of low back pain while the 36-year-old female reported having a fully blocked left fallopian tube, a partially blocked right fallopian tube and dysmenorrhea. Subluxations were detected using the TRT protocol and adjusted using the Integrator. The first patient was very irregular with the frequency of care, underwent surgery and was vaccinated during this time but after approximately three months of care reported being pregnant. The second patient was consistent with care and two weeks after her 11th visit reported being pregnant.[17]

Dr. Martin Rosen highlighted a case using the sacro-occipital technique. A 34-year-old woman presented with a variety of conditions including infertility. After being unable to conceive naturally with her first child but achieved success after utilizing in vitro fertilization. Sacro-Occipital Technique assessment, adjustments and blocking were performed with this patient. After approximately 4-5 weeks of care the patient was able to report that for the first time ever she was able to have a natural conception.[18]

As previously stated many techniques have been shown effective. This case as reported by Dr. Shelley resulted in conception utilizing the Directional Non-Force Technique (D.N.F.T). A 32-year old female sought chiropractic care

after trying conventional medicine. She had previously attempted using the drug Clomid, artificial insemination and detailed fertility testing with no success. Three weeks prior to starting care she underwent in vitro fertilization, which also failed. She and her husband had been attempting to become pregnant for two years. After receiving chiropractic care for six weeks, a second in vitro fertilization attempt was made. Roughly two weeks later a pregnancy test confirmed her pregnancy.[5]

A 27-year-old female presented with infertility due to anovula. Authored by Drs. Lombardi and Revels, this patient sought chiropractic for not only infertility, but also low back pain, headaches, neck pain, mid-back pain, sinus problems, sore throat and dizziness. To manage the infertility, she was taking several medications, which consisted of clomiphene citrate (Clomid) to induce ovulation; estradiol, which acts as growth hormone for tissue of the reproductive organs; prenatal dha (prenatal vitamin); and ethinyl estradiol (Levora). Her previous child was born via emergency c-section. The initial portion of her care plan consisted of three visits a week for eight weeks. Mirror image adjustments utilizing Thompson drops and diversified adjustments were made. After approximately 19 adjustments the patient found out she had conceived. During the month of conception the patient reported she had stopped taking her infertility medication.[19]

Another study utilizing the diversified technique was reported by Drs. Borkhuis and Crowell. Patient was a 31-year-old female reporting a 3-year history of infertility, menstrual pain, heavy bleeding and cycles frequently lasting only two weeks. She also reported upper back and neck pain and migraines. The patient was seen twice a week for six weeks. After under a month of care the patient reported being pregnant and reduced migraine headaches.[20]

In 2012, Drs. Wolcott and Hughes detailed the case of an infertile 28-year-old female with a history of ovarian cancer. She reported not being able to conceive for a two-year period of time. At the age of 19, she had to surgically remove her right ovary and was left with ¾ of her left ovary functioning. Prior to chiropractic she attempted to become fertile using the drugs Clomid and Perganol. After her initial exam and history, she received high velocity low amplitude diversified adjustments for an initial plan of 12-15 visits. After 14 visits the patient reported being pregnant. She continued to receive chiropractic adjustments throughout her pregnancy and delivered her baby without complication vaginally.[21]

Drs. Stone-McCoy and Abbott published a case of a woman diagnosed with polycystic ovary syndrome six months prior and deemed infertile by her medical doctor. She denied any other symptomatology and reported overall good health. This patient was adjusted utilizing the diversified method over a course of two months, at which time her medical doctor had confirmed she was pregnant. The estimated date of conception was between her 2nd and 5th visit.[22]

Medical Management

Conventional medicine treats infertility with an array of drugs and surgery. Some of the most common drugs used are Clomiphine Citrate (Clomid), which is used to induce ovulation. Other drugs are used to prevent egg release from the ovaries. The common drugs of that function are Crinone progesterone, a variety of vaginal gels and Lupron.[23,24] There are also a variety of surgeries used to encourage conception. Laparoscopies are common procedures to allow doctors to examine the abdominal and reproductive organs for cysts, adhesions, fibroids or other pathology. Two other common surgical procedures are intrauterine insemination (IUI) and in vitro insemination (IVF). IVF is often performed when the patient is experiencing cervical narrowing, low sperm counts or fallopian tube blockage. In an IVF procedure the egg is retrieved from the female and fertilization happens outside the body. If there is successful fertilization an embryo transfer will take place. IUI is most often performed when a patient has endometriosis, anovulation, immunological abnormalities or if the etiology is unknown. The egg is left in place and fertilized by placing highly motile sperm in the cervix or uterine cavity.[24,25] In the case presented multiple allopathic treatments were attempted (Clomid, IUI, IVF) all with no success.

Complementary and Alternative Medicine

There are many different treatments listed throughout literature about treating infertility alternatively including acupuncture and different herbal medicines as some of the most popular. Acupuncture inserts needles into different points in the body along what are called channels or meridians. This treatment does not claim to directly treat infertility but rather treat some of the underlying issues that may be contributing to infertility such as hypothyroidism, tubal adhesions or decreased blood flow to the endometrium.[26] Another very popular treatment is herbal medicines. Herbal medicine has been used for thousands of years to help with different health ailments. Herbs are considered a very safe alternative to conventional medicine and help the functions of ovulation process. Vitex and red clover are some of the most herbs to treat infertility. It is reported that herbal medicine helps enhance the function of gonadotropins and can be effective when combining them with IUI and IVF.[27] Herbal medicine and acupuncture are often combined to treat infertility.

Mechanism of Vertebral Subluxation

Many different models of subluxation exist in chiropractic literature, as Dr. Kent describes in his Models of Subluxation: A Review. In this publication he addresses some of the most popular and scientifically defendable models. One of which is the dysafferentation model of subluxation. This model suggests that when aberrant motion in the spine occurs that that will result in aberrant input into the brain. As Dr. Kent states “garbage in, garbage out.” In addition to this is the affect that aberrant motion has on the mechanoreceptors along the spine. Mechanoreceptors will increase nociceptive input into the central nervous system that in turn will increase the sympathetic response of the body. Increased sympathetic response and tone has been shown to negatively affect many processes of the body.[28]

Limitations

This study was limited in that it was only one single case being presented. More time could have been spent pre and post adjustment to measure the presence of the subluxation, the effects of the adjustment on the body as a whole and the adjustment's affect on the subluxation.

Conclusion

This study helps show the clinical application of chiropractic care and infertility. While chiropractic does not treat infertility, studies have shown the vertebral subluxation and their effect on the autonomic nervous system. The ability of the nervous system to work more efficiently can lead to many desired benefits. The evidence of this case being that after multiple failed conventional medical treatments, 16 chiropractic adjustments over a span of 55 days resulted in a once infertile female being able to conceive a child and carry the baby to term. Chiropractic is a safe, effective, low cost option for those seeking a natural conception. This is once again not intended to imply that chiropractic treats infertility; again chiropractic addresses vertebral subluxations causing a lack of neural integrity, which once corrected result in the ability of the body's nervous system to heal itself. This article should further encourage the scientific community to seek further research into the effectiveness of chiropractic care and infertility.

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Date	1st Segment Adjusted	2nd Segment Adjusted	3rd Segment Adjusted
11/26/2014	C1	S1	L5
12/1/2014	C0	S1	C2
12/4/2014	C1	Illium	L3
12/8/2014	C1	S1	L3
12/11/2014	C5	C0	Coccyx/Sphenoid
12/15/2014	C1	S1	L3
12/22/2014	C1	S1	L5
12/23/2014	C1	S1	Illium
12/24/2014	C1	L3	Coccyx/Sphenoid
12/29/2014	C1	S1	L5
12/31/2014	C0	Illium	C7
1/5/2015	C1	S1	L3
1/8/2015	C1	S1	Illium
1/12/2015	C1	L5	C0
1/15/2015	C1	S1	L5
1/20/2015	C1	S1	C0

Table 1: Summary of dates & segments adjusted.