

Sacro Occipital Technique
Management of a Thirty Four Year
Old Woman with Infertility

Outcome of Adjusting Protocols Showing a
Positive Response to Chiropractic Care

ABSTRACT

Objective: The bulk of this article will deal with the presenting condition of infertility and how corrective chiropractic care (specifically Sacro Occipital Technique) has influenced the aforementioned condition.

Clinical Features: This thirty four year old woman entered my office on January 10 2000, seeking chiropractic care for a variety of conditions, including help with her infertility.

She had previously attempted to get pregnant in the usual and customary manner but was unable to do so. Eventually, after a series of fertility drugs that failed to produce results, she was able to conceive a child through in vitro fertilization (test tube baby) and implantation. Her son was born on July 3, 1998. Approximately one year after his birth she again attempted to get pregnant but was unable to do so.

Her clinical history revealed a number of gymnastic injuries over a twelve-year period and several “minor” car accidents. She stated that she has suffered from chronic back pain and spasms for years, as well as a chronic condition of unknown etiology that causes her hands and feet to be painful and difficult to use in the morning, and occasional neck pain. No other significant clinical history was reported.

Chiropractic Care and Outcome: On her initial visit this patient underwent a complete chiropractic evaluation. Standard chiropractic evaluation procedures were used as well as specific Sacro Occipital Technique protocols. The evaluation revealed: restricted ranges of motion in the lumbar spine upon flexion and in the cervical spine upon left rotation, right and left lateral flexion, weakness in the hamstrings and gluteus maximus bilaterally, and in the psoas on the left. Positive orthopedic tests included:

Nachlas, Ely on the left and Yoeman's bilaterally. Standing postural analysis showed a high right hip, high left shoulder and a mild thoracic kyphosis. Sacro Occipital Technique evaluation determined a primary Category II sacro-iliac joint instability complex through the following positive findings: cervical compaction compression test was positive for a pelvic major subluxation, rib head analysis revealed hypermobility and tenderness of the right first rib head, positive arm fossa testing was present on the left side in both the upper and lower fossa, a functional short leg was accessed in the prone and supine position, and the standing Mind Test was positive for a Category II subluxation complex.

The patient was put on a six-week intensive care program to stabilize her Category II subluxation complex after such time a re-evaluation was performed to determine the necessity and frequency of continued chiropractic care. All adjustment procedures were determined through the specific use of Sacro Occipital Technique indicators and objective evaluation was dependent on these indicators.

Adjustments over these first six weeks included Category II blocking procedures for a left short leg, correction of psoas muscle imbalance determined through overhead psoas test, thoracic 7 inferiority adjustments established through trapezius fiber analysis, sacral and lumbar 5 structural corrections based on Sacro Occipital resistance and contraction (R&C) factors, cervical cavitation corrections of subluxations determined by cervical stairstep evaluation, and thoracic 4 rotational corrections determined by Occipital Fiber analysis.

Objective findings after the first six weeks showed marked improvement.

Findings of her re-evaluation on March 8, 2000 showed all cervical and lumbar ranges of

motion returned to normal, only the left psoas and gluteus maximus muscle weakness was present, Category II fossa weakness was no longer present, rib head and Mind Test analysis was negative, and standing postural analysis revealed level hips and shoulders. The patient reported what she described as “huge changes”, her low back and neck pain were completely gone and the pain and stiffness her hands and feet was no longer present. Also, she had been able to get pregnant naturally for the first time in her life. Conception occurred approximately 4-5 weeks into her intensive care program. Her Category II subluxation complex had been stable since January 21, 2000, eleven days after starting care in my office. The patient continued reconstructive care on a reduced frequency basis through October 2000 at which time her daughter was born.

Conclusion: Though direct clinical evidence is not apparent from one case study it is important to note that in this particular case the patient made no other alterations in her lifestyle or clinical situation besides the addition of chiropractic care to afford such a positive outcome. Correlation of clinical findings directly supported the reduction of the patient's subluxation complex in this case and the changed neurophysiological parameters were evident. Since infertility is such a growing concern and present medical alternatives not only have limited success but involve a myriad of concerns for the patient it is prudent to look at other less invasive and costly methods for dealing with this problem.

Key Words: Sacro Occipital Technique, infertility, low back pain, neck pain, parithesias

INTRODUCTION

Infertility is on the rise affecting approximately 6.1 million American woman ages 15-44 (1995) and 2.1 million married couples (1995) (1). About 40% of infertility is attributable to female factors, 40% to male factors, 15% to a combination of both female and male factors and 5% to unexplained causes (2) (3). The number of woman using infertility services is approximately 9.3 million (1995) (1). The causes of infertility can include: medical conditions, sexually transmitted diseases, environmental factors, lifestyle, and drug and alcohol abuse (2). The standard medical approach to the treatment of infertility is to encourage both partners to undergo a specific infertility evaluation. This includes a complete medical history, a physical examination and diagnostic testing. For the female the physical exam may include a pap smear, pelvic exam, cervical cultures, urine analysis, blood tests, and pelvic imaging. Diagnostic tests may include: reproductive hormone tests, basal body temperature (BBT), luteinizing hormone (LH) monitoring, post-coital test, endometrial biopsy, cultures for Chlamydia and Mycoplasma, immunologic testing, hysterosalpingogram, laparoscopy, and hysteroscopy (2).

Once this evaluation process is complete an appropriate treatment program and options are decided upon. Conventional infertility treatment consists of hormone therapy designed to balance the body's production of the hormones responsible for follicle development and ovulation in women. The use of these gonadotrophins will increase the likelihood of conception by stimulating the ovaries, enhance ovulation or cause more than one egg to be produced at one time. The medications included in this category are: Clomiphene Citrate which acts on the brain to stimulate the release of ovarian stimulating

hormones, Human Menopausal Gonadotrophins or HMG such as pergonal, Humegon and Repronex which stimulate the ovaries to produce more follicles, Follicle Stimulating Hormone of FSH such as Follistim, Fertinex, Gonal-F which also stimulate the ovaries to produce more follicles, Human Chorionic Gonadotrophins or HCG such as Profasi and Pregnyl that mature the eggs in the follicles and trigger the release of the eggs, Progesterone is a hormone which has a significant role in preparing the endometrium for implantation of the embryo, Leuprolide Acetate (Lupron) which acts upon the brain to suppress hormonal production necessary for follicle development and egg release (2). In some instances surgical procedures are used to remove a physical blockage or correct structural problems in the reproductive organs. Therapeutic surgery such as operative laparoscopy, operative hysteroscopy or laparomy may also be considered. Intrauterine insemination can also be used to insert a specially prepared sperm through the cervix into the uterus to increase the likelihood of fertilization. Assisted reproductive technologies (ART) are procedures that involve stimulation of the ovaries, retrieval of eggs, in vitro fertilization, and transfer of embryos or eggs. In vitro fertilization (IVF) allows fertilization to occur in the laboratory and transfers the resulting embryo(s) through the cervix into the uterus, bypassing the fallopian tubes. The use of drug or hormone therapy is also combined with these ART procedures to increase the likelihood of collecting multiple eggs and to control the timing of your cycle. Also, to increase the likelihood of conception, hormonal therapy may be used after the transfer has taken place. “There is no guarantee of the success in the treatment.” (2)

The final steps in considering the medical approach to infertility are the factors involved in the process beyond just the procedural aspects. These may include: time commitment,

costs, insurance coverage, job/career, religious beliefs, cooperation between partners, medical diagnosis, emotional energy, chances of success, and side of effects of the therapy itself.

I feel it is important here to discuss the success rates involved with these procedures to give the reader an opportunity to make a more informed choice. Though there are a number of ways to calculate success the most important measure of success is the percentage of couples that initiate treatment and ultimately take home a baby. “Probably no topic in the complex field of infertility is as confusing and misleading as IVF success rate statistics. There are three different ways to measure success rates that tend to confuse the issue. Clinical Pregnancy Rate per Cycle Initiated – is the number of clinical pregnancies divided by the total number of women who initiated treatment. Clinical Pregnancy Rate per Retrieval – is the number of clinical pregnancies divided by the number of retrievals. Clinical Pregnancy Rate per Transfer – is the number of clinical pregnancies divided by the number of women who had an embryo transfer. Actual statistics vary from study to study and clinic to clinic ranging from a low of 18% to a high of 44%. Variations are also strongly dependent on age and other health factors with woman over 40 showing the lowest percentage of clinical pregnancies. It is important to note that a clinical pregnancy does not necessarily denote a live healthy infant being born but is defined as: one or more gestational sacs confirmed by ultrasound (2).

Infertility is an emotionally devastating clinical problem for couples who want to have children. The current medical approach is far from foolproof and involves a lot of time, money, commitment, and invasive procedures. Therefore it is in the best interest of the public to explore other effective and less involved procedures. In this case study we will

be exploring the effect on infertility of chiropractic care in a 34 year-old woman. The present literature regarding chiropractic care and its effect on infertility is quite limited and inconclusive. The majority of the information is relegated to specific case studies. Clinical trails and outcome assessment statistics are presently unavailable regarding chiropractic care. This case study is designed to offer direction for further research and conclusions drawn from it are standard chiropractic neurophysiological parameters relating to the removal of vertebral subluxations and their effects.

CASE REPORT

In this particular case study the patient (a 34 year-old woman) entered my office with several physiological complaints, one of which was the fact that she had been diagnosed as infertile. She had only been able to conceive her first child through in vitro fertilization and implantation. She had been trying to get pregnant again without intervention after his birth but was unable to do so prior to receiving chiropractic care in my office.

Methods: The technique of choice used to adjust this patient was exclusively Sacro Occipital Technique blocking procedures and Sacro Occipital spinal evaluation protocols. Adjustments to reduce the subluxations, once discovered through SOT procedures, were mostly cavitation high velocity type with some orthopedic blocking (a specific SOT low force lumbar adjusting procedure) used in certain lumbar subluxation corrections. Due to the nature of the patient's spinal condition other Category procedures were utilized when

called for including Category I occipital fiber evaluation and adjustments, sacral base cough test evaluation and adjustment and Category III resistance and contraction (R&C) factors evaluation and adjustment.

Initial care in this patient's case began with Category II blocking procedures for a left short leg to stabilize the sacro-iliac joint. At the same time specific adjustments were made to the sacrum to remove the rotational component of the subluxation to allow for normal establishment of proper SI joint alignment. To restore normal CSF flow and sacral base position pelvic blocking procedures and vasomotor adjustments were also used to correct an SB+ (sacral base anterior) subluxation. Subluxations of the thoracic and cervical spine were corrected when specific indicators (trapezius fibers for thoracic adjustments and cervical stairstep for cervical adjustments) appeared. During the pelvic stabilization period underlying subluxation patterns began to develop of a Category I nature and occipital fiber evaluation and corrections were begun along with the SB corrective procedures. Finally, as the Category II complex began to stabilize old lumbar subluxation patterns began to show up and were located by evaluation of the resistance and contraction reflex indicators for lumbar subluxations and corrected lumbar side posture adjustments and SOT one block orthopedic corrections.

Materials: Since the specific case history, examination findings, and adjustment schedule were addressed earlier in the section Clinical Evaluation and Outcome it is important at this time to discuss the Sacro Occipital Technique findings, protocols and neurophysiological consequences to better understand the positive clinical outcome of this case. The trademark of Sacro Occipital Technique is its unique use of wedge-shaped blocks to normalize the attitude of the pelvis in a gentle, specific way. Depending on

their placement these blocks can alternately stabilize the SI joint, reduce meningeal tension, or relieve pressure from the intervertebral disc safely and without force. They are an essential part of the Category I, II, and III corrections.

Results: The clinical objective and subjective results in this case were extremely favorable. After just eleven days and five chiropractic adjustments the patient's Category II pelvic instability was beginning to stabilize. Category II blocking procedures did not have to be used for over two months until an acute exacerbation occurred. While specific lumbar and sacral adjustments were made during the stabilization process the global effects of the Category II complex were apparently alleviated based on the clinical re-evaluation in March 2000 and the patient's subjective report of the absence of symptoms and the ability to conceive naturally for the first time in her life. Besides the addition of regular chiropractic care this patient reported no other changes in her lifestyle to warrant these positive health changes.

Her objective clinical evaluation, described earlier in the section Clinical Evaluation and Outcome, showed significant reductions in all subluxation parameters, both standard chiropractic evaluation procedures and Sacro Occipital Technique findings. These correlated directly with the patient's subjective report. Though evidence of subluxations still remained it is important to note that by SOT standards these had approached another level of neurological facilitation and was also starting to be addressed in the initial period of care. The purpose of initial intensive care is to begin to remove or reduce the presenting subluxation complex and neurological facilitation and set the stage for further corrective / reconstructive care to further reduce this subluxation complex and attempt to uncover and remove the primary subluxation.

Major DeJarnette the inventor and developer of Sacro Occipital Technique described this process in the 1940's when he said: ““distortions (Vertebral Subluxation Complex) are massive muscular efforts which result in specific and localized fixations. These fixations act as a source of nerve stimulus to other muscles until the body reaches an impasse. They result from a primary area of segmental neuron stimuli, but by the time you see the patient, so many things have happened that it is difficult to make an effort to locate the basic area of subluxation.” (4)

“The only true subluxation you ever see must be in a child prior to the age of seven years. That subluxation is an actual vertebral misalignment with muscle protectors. If this subluxation goes uncorrected it becomes a primary source of stimulus through life, but the tombs of distortion which form from one traumatic experience to the other soon bury this primary subluxation under that ‘tomb of distortions’ and only a true SOT procedure can uncover and reveal its position.” (4)

DISCUSSION

All Sacro Occipital Technique categories consist of a specific set of clinical parameters relative to their neurophysiological implications. The initial evaluation is utilized to determine the predominant category present at the time of the patient's initial visit and to work from this point backwards to uncover the primary subluxation at the core of the compensatory process. Testing is performed in the prone, supine, standing and seated position to determine the predominant category subluxation complex. Each category has a predominant set of indicators that must be found and then addressed for optimum correction of the subluxation to be obtained in each case.

The Category One, which deals predominantly with the primary sacral occipital respiratory mechanism, flow of cerebral spinal fluid (CSF), and reciprocal motion between the occiput and sacrum, encompasses within its parameters structural, segmental, meningeal and tonal components. "The primary respiratory mechanism of the sacrum affords means for moving and regulating the pressure of the cerebrospinal fluid, and only the mechanical motion of the sacral boot can accomplish this feat." If this system begins to fail, a series of neurological and structural consequences ensue. First, a mechanical pelvic distortion will arise offsetting this sacral boot mechanism. This will lead to an initial vasomotor subluxation in which the malposition of one or more specific vertebrae in a posterior inferior direction will fixate, causing localized reduction in CSF flow and vasoconstriction. The torsion created by this pelvic distortion pattern will affect the spinal meningeal system up to atlas, creating a subluxation of the CI vertebrae with its concomitant neurological and structural consequences. If this pattern remains

uncorrected the vasomotor subluxation will most likely lead to dural port restriction at specific vertebral levels as rotational components of the structural subluxation become evident. This process affects the entire central and autonomic nervous systems and sets up neurological indicator patterns from the cranium to the sacrum. Depending on the individual's response to the subluxation pattern, either primary neurological or structural facilitation will occur. Within the parameters of the Category One system, specific procedures and indicators are used to evaluate the spinal subluxations and determine the primary ones to be adjusted at a specific time and in a specified sequence. (5)

Category Two, with its focus on the hypermobility subluxation of the weight bearing portion of the sacro-iliac joint and its accompanying compensatory patterns, stresses the structural, segmental and dural sutural system in its subluxation model. "The sacroiliac slip is one of motion, not one of fixation. The sacrum in the adult is firmly fixed in position in relationship to the weight-bearing surfaces, permitting respiratory motion of flexion and extension in the boot mechanism. Excessive trauma (physical, emotional, chemical) will cause the weight-bearing mechanism of the sacroiliacs to slip either forward (anterior) or backward (posterior) and in so doing protect the boot mechanism in so far as mechanically possible." If not for this compensation, damage to the boot mechanism and the primary sacral-occipital respiratory mechanism would occur, causing irreparable damage to the individual. When this sacroiliac slip takes place it initially sets off a series of musculoskeletal compensations related to the weight bearing function of the sacroiliac joint. These distortions directly effect the proprioceptive feedback mechanisms first in the CNS, and secondly in the extremities. These structural compensations if left uncorrected will now affect the dural and sutural system in the

cranial vault causing dural meningeal traction throughout the cranium. This subluxation pattern will cause compression as well as neurological traction type subluxations due to the enormous compensatory mechanisms involved. It creates abnormal neurological responses throughout the nervous system. It is extremely common in this subluxation pattern to find either hyper or hypo tonicity throughout neuromuscular system. (5)

The Category Three involvement of disc and ligamentous degenerative or traumatic processes tailors its indicator system to delineate the segmental, structural and degenerative components of the subluxation model. “The postural attitude of the sacral base determines the efficiency with which man will respond to his environment. The postural attitude of the sacral base determines the functional force of the intervertebral discs and the amount of nourishment they shall receive both at rest and at work.” If the sacral base is less than 30 degrees, the discs will be undernourished and spondylitis or spondylosis will begin. It is this type of subluxation pattern that sets the discs up for early and easy compression, extrusion, rupture and degeneration. When the sacral base angle is greater than 30 degrees, the motion of the primary respiratory mechanism is excessive in extension and decreased in flexion. This leads to CSF stasis and a tendency for acute spinal pain developing on the slightest exertion. Here chronic muscle spasticity and limited ROM lends itself to reduced blood flow to the spinal motor units and increased propensity for motor unit degeneration. (5)

This particular patient ‘s symptom complex showed evidence of global neurophysiological changes affecting the autonomic nervous system, resulting in aberrant parasympathetic-sympathetic balance and viscerosomatic reflex dysfunctions. Negative

effects on the pituitary and thyroid are also common consequences of Category I and II subluxation patterns (6). Aberrant neurological facilitation due to Category II pelvic imbalances and specific lumbar or sacral subluxation can also play a role in pelvic organ malpositions and resulting physiological consequences (6). Many researchers have found the effects of the vertebral subluxation to be not only global in nature but to have far reaching effects on the health of the individual.

According to Alf Brieg, M.D.: “nerve tissue reacts adversely to stretching and the hypermobility of the spine causes nerves to stretch abnormally, causing immediate pathophysiological changes as well as long-term neuropathologic changes”. He has also stated that: “the spinal cord itself cannot be considered in isolation from a biomechanical point of view. It must rather be considered in conjunction with the supporting and associated tissues, as a continuous tract, from the mesencephalon to the conus medularis” (7).

It is also of worth to note Dr. Irvin M. Korr findings that a “facilitative lesion describes a neurological consequence of a disorder of an organ or of a component of the musculoskeletal system, that consequences being that the segment of the spinal cord supplying innervation to the affected component is hyper-responsive to impulses from the peripheral nervous system or from the CNS – the segment is hyper-irritable. Facilitation arises directly as a consequence of irritation of nerve fibers”. (8)

And Dr. Karel Lewit was able to establish “something like a ‘spinal pattern’ for some visceral diseases, including peptic ulcer, gynecological affections and tonsillitis (9).

Finally, Desmond B. Johnson, B.Sc., Ph.D. after exhaustive literature research stated that:

“it must be concluded that vertebrogenic disorders, through facilitation of the SNS (sympathetic nervous system), can have a variety of effects, wider than the obvious pains in the back, thorax, and limbs”. (10)

CONCLUSION

Though definitive conclusions cannot be drawn from the results of one case study, given the implications for standard medical treatment of infertility, it is possible that chiropractic care can be a much less evasive approach to the problem. Given the fact that appropriate chiropractic care is likely to have an overall positive impact on the patient and not preclude the use of more evasive procedures at a later date continued research regarding its efficacy in the treatment of infertility is warranted.

One particularly interesting aspect of this case is that the patient undertook no new regimes, procedures or lifestyle changes, except chiropractic care that might have influenced the outcome. The direct relationship to pelvic subluxation patterns and the neurological innervations of the pelvic structures is also a relevant area for further investigation as well as the overall effect on the hormonal system caused by subluxations and their subsequent removal.

Since infertility appears to be a growing concern, it is important that we look for as many effective ways as possible to deal with the increasing numbers of infertile couples. The standard medical approach to this problem is not only costly but calls for considerable commitment, emotional investment and has inherent side effects. Chiropractic on the other hand, as in many other areas of health care, may offer a cost effective, non-invasive approach for infertility and further research and clinical trails are of primary importance.

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