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PAEDIATRIC ASTHMA AND MANUAL THERAPY-
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ABSTRACT

Background: Asthma is an inflammatory clutter of the airways that causes wheezing, breathlessness, chest tightness, and coughing. In India, approximate calculation indicates a prevalence of between 10% and 15% in 5-11 year old children. Modern Western treatment focuses on controlling asthma with two classes of medication corticosteroids and bronchodilatorss. Another plan of action for reducing and potentially even throw out asthma manifestation affects manipulation of the craniosacral fascial system. This system is a unification of the craniosacral and fascial or connective tissue part. This idea can help in making clear the greatly high rate of achievement with manual therapy in pediatric asthma.

Methods: In this case report first I have taken a brief history of the patient condition after the full assessment like brain cycle rhythm, chest and systemic. I have given crania sacral therapy, Intercostal release, PNF for diaphragm release on child for seven sitting of about 45 minutes of each session.

Results: After completion of treatment session of seven sitting his lungs to be bright of any wheezing or other impediment. Brain cycle was of 90 seconds. His peak flow meter readings were between 250 and 300 Liters/minute, which were in a satisfactory range for him. The physician suggested that at this point there was no requirement for any additional asthma medicines.

Conclusion: It comes into sight that the loss to the respiratory system caused by fascial burden early in life may be fully reversible, if treated immediately. The latent grace of this interdependent approach is that it crop up to address the pathological origin of asthma.

Keywords: Asthma; Craniosacral therapy; Fascial strain; Fascial therapy; wheezing.

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INTRODUCTION

Asthma is an inflammatory clutter of the airways that causes breathe heavily, shortness of breathing, chest congestion, and coughing. In India, approximate calculation indicate a preponderance of between 10% and 15% in 5-11 year old children.¹ Nine million children in America have been diagnosed with asthma in aged less than eighteen years.² The asthma rate in American children less than five years of age has increased more than 160% from 1980 to 1994.³ Nearly 5,000 Americans die every year from asthma. A predicted 300 million public of all ages and racial backdrop from all over the world hurt from asthma and roughly 250,000 people a year die from it.⁴ Modern Western treatment focuses on controlling asthma with two class of medication. In the first group anti-inflammatory drugs (corticosteroids) decrease inflammation and mucous formation in the airways. Second class of medication is bronchodilators which relax the smooth muscle cells that tighten around the airways; the child's breathing become well when the tracheobronchial tree opens.⁵ Another plan of action for reducing and potentially even throw out asthma manifestation affects manipulation of the craniosacral fascial system. This system is a unification of the craniosacral and fascial or connective tissue part. William Sutherland D.O. found the craniosacral aspect around one hundred years back.⁶ He brings into being that the cranial bones and sacrum moved as the brain breathed.

More recently John Upledger D.O. lend supported the concept by uncovering that the strain from injury was generally held in the connective tissue of the dura and not the bones.⁷ In the craniosacral theory human physiology is powerfully reliant on the slight motion of the brain and spinal cord and the variation of the cerebrospinal fluid inside the meningeal and osseous systems.⁸⁻¹⁵ Craniosacral theory holds that injury can hinder the normal rhythms of this variation and result in disease and organ dysfunction. Manual therapy can help reequilibrated these natural nervous system rhythms and permit a back to health.¹⁶ Craniosacral therapy is now being acknowledged as an important tool for an integrated approach to healthcare.¹⁷ Erickson et al bestowed a case review of a child accompanying periodic otitis media and upper respiratory ailments.¹⁸ This child, who had responsive airway disease conceivably prosper into asthma, react positively to craniosacral therapy as part of an integrated way. Mehl-Madrona et al studied the collaboration of accu and craniosacral therapy in the clinical effects of adults with asthma.¹⁹ In their analysis of eighty-nine chronic

adult asthma patients, they come to end that craniosacral therapy was conceivable a useful supplement to the conventional concern of adults with asthma. In this way the craniosacral or -brain cycle is the key sign to check how healthy the craniosacral fascial system is functioning.

The brain cycle is the amount of —breathing time for the brain to completely extend and completely contract in its basic motion. The greater the brain —breathes, the excelling it functions. In asthmatic children the cycle is usually plenty smaller than is healthy—often under ten seconds. A cycle of eighty seconds or above is in most cases taken healthy. Thus the main goal of the craniosacral therapist in the management of a child with asthma is to help build up the healthy longer cycle of cerebrospinal fluid variation and flow. The fascial or connective tissue part of the craniosacral fascial system is a completely body web that twist around and introduce with every structural cell of the body containing muscles, nerves, blood and lymph vessels, organs, and bones. The web is a refined network of collagen, reticular, and elastic fibers with many types of cells, all deeply involved with in a fluid ground substance. John Barnes P.T. has depicted how physical injury to the fascial system can lead strain patterns anywhere in the body.²⁰ These strain arrangement can pull on structures, containing the craniosacral and respiratory parts, at up to 2,000 pounds per square inch.²¹ This hidden pulling inside the body can devote to many manifestation and conditions along with pediatric asthma.

Craniosacral fascial therapy as adept in this case can help absolution these severe craniosacral and fascial strains and bring back normal physiology and health to a child with asthma. The extreme challenge in implementing this technique to clinical practice is that there is no perceptible medical test to recognize connective tissue malfunction for an asthmatic child. Injuries that are deliberated in the —normal range of life, which happen in utero, or during delivery and childhood, can have the promising to construct nonessential strains in the respiratory system. At the time these injuries may go ignored clinically, but may next present as effects in the form of thoracic pressure, defective breathing, and asthma. Repeatedly the parents can recognize a particular frightful event, which they feel may have been a cause to happen for their child's asthma.

Case presentation

History

A ten-year-old Indian boy presented on July 5, 2015 for assessment. His mother told that his principal

condition was wheezing, coughing, chest tightness, and shortness of breath. Over the years all four of her sisters had accompanied their offspring for therapy of discrete chronic illnesses, but she was still unenthusiastic and very disbelieving that this treatment would work for her son on account of his progressive condition. He had advanced respiratory symptoms at twelve months of age, had been examined by many consultants, and had been on diversified medications since that time. The pregnancy was monotonous until the thirty-ninth week when the mother had edema, headaches, and high blood pressure. On account of the fetus was accentuated, delivery was persuaded. After more than six hours of arduous labor, he was delivered with the help of a vacuum suction tube. His mother stated that as a result, he had a cone-shaped head for assorted weeks. He was also managed for icterus in the early week of his life. When he was ten months old, he developed a periodic cough. He was started on albuterol and then at six years of age changed to levalbuterol hydrochloride. At various times he has also been managed with cromolyn, fluticasone propionate and salmeterol, and montelukast, also with a short course of prednisolone for intensification. His last course of oral steroids was in March 2012. He has also taken cetirizine HCL and budesonide for cyclical allergies.

The trademark of his bad health was that a cold would consistently cause to appear asthma. Not including weekends and holidays, he missed eight days of school in Kurukshetra, twenty nine days in first grade, and thirteen days in second grade on account of asthma. He had not at any time had any crisis room visits, and had not at any time been hospitalized. His asthma symptoms would usually aggravated with the weather changes in the spring and fall; the freezing winter months were often usually crucial. In extension to his asthma, his medical history was unusual for some session of otitis media, cyclic mold allergies, sporadic headaches, and cough about three to four times per year, lasting five to six days for every episode. He has had pneumonia three times in his life for which he has enforced oral steroid and antibiotic management. In accordance with his mother, he also commonly grinds his teeth at night. In school he has had problem in reading understanding. He has had the usual youth injuries but has not at any time been unconscious. He had bicycle casualty three years prior; he flipped off his bike, and the handle bar rushed hard under his left ribcage.

Clinical Findings

In the assessment procedure I caress for tissue burden in the diaphragm, lungs, tracheobronchial

tree, throat, neck, cranium, and nasal sinuses. The coveted conclusion of asthma management is to manually help the body allay soft tissue strain from the nose to the diaphragm over array of sitting to free the respiratory structures. His brain cycle was two seconds, one second in extension and one second in shrinkage, signify an enormous strain in his cranial dura and pressure in his head. This incredibly decreased the brain's movement and the flow of wholesome cerebrospinal fluid. His facial bones, sacrum, and dural tube were differently cramped with no noticeable motion. Beautifully, the facial bones and sacrum should be moving in harmony with the same long brain cycle. The movement of the cranial structures and sacrum are reliant on a moving connecting dural tube, which should move smoothly like a sleeve about ten to fifteen millimeters over the spinal cord.

Life is movement, and the entire cranio dural tube-sacral structure is essential to be moving without restriction for the most excellent desirable neurophysiology of the child. The structure of his head was uneven, an accepted verdict in asthmatic children. The temporal and parietal bones on the left side were medially twirled and the temporal and parietal bones on the right side were laterally rotated. This pointed out cranial trauma at some point in his life, apparently from the difficult birth, which created irregularity, meningeal strain, and a short brain cycle. A well-proportioned head may be valuable for relief of strain around the vagus nerve and its dorsal nucleus and parasympathetic motor fibers as it pass by way of the cranium between the temporal and occipital bones. As the meninges acquittal their burden patterns in management, the assumption is the return of a well-proportioned head and, at the same time, a deep, more physiologic brain cycle. Upon caress of the respiratory structure, I brings into being severe fascial burden in the left lung area. Some fascial burden was in the tracheobronchial tree and right lung area, but the left lung area was without any doubt his most distressed region. The fascia in his throat was almost peaceful, but burden was present in the back of his neck and nasal sinus area.

In utmost childhood asthma cases, as was the position here, fascial strain from the lung area can haul directly through the neck on the sinuses bring about nasal bottleneck. On account of the body is completely co-dependent through the craniosacral fascial system, a child's asthma, ear pain, and headaches may all have the identical frightening cause. A distinct burden pattern in one part of the body can have a bigger brunt on a distant area. Exterior of the respiratory system, his fascial netting was not related to his asthma. His

respiratory muscles were in good condition and did not need muscle treatment. In anatomically evaluating the boy's case I told his mother that he had an uncompromising craniosacral fascial burden that started in his left lung area and hauled through his neck into his nasal sinuses. I outlined array of one-hour therapy sitting with the goal of using this treatment to coming again his respiratory system to health.

TREATMENT AND RESULTS

The purpose of action of the first appointment was to start to help the body permit the extent of his brain cycle to increase, and begin to free the fascial limit in the respiratory system. His cycle opened from two to forty seconds, a wonderful feedback to therapy. One can speculate that with his history of birth injury, his brain has been snug with this low cycle his entire life. So after ten years of unending pressure, likely on the vagus nerves, his brain comeback very positively. He showed meaningful wonted fascial burden in the left lung area. When I initiated to trial in this region, he could feel the burden as a thirty-second pressure pain. Once the tissue begun to release, he felt some comfort. The entire concept of asthma management is to find fascial burden and help the body release it. The enormous value of this technique is that the therapist can work through the clothing over the chest and still access and help the body, via the connective tissue network, release the fascia below to the lung tissue. After the therapy session was over, the boy said that he could breathe more without restriction. At the second sitting his brain cycle was still on at forty seconds. His mother said that he was awfully verbally alive for a day after the therapy, and that he had done pleasantly complete during the past week. His head was around well-proportioned after only one sitting.

I did some small pelvic and leg burden work. His left lung area was still burdening, but not as plenty as the first sitting. I also processed in the tracheobronchial tree and right lung area. His brain cycle completed the sitting at fifty-five seconds, a very satisfactory cycle for just two therapy sitting. At the third visit his mother amazed me by sharing that outside my information she had taken him off all of his asthma medicines after the first therapy sitting to see if this therapy technique would work. The medicines were accessible, but he had not desired it since therapy begun two week ago. I usually communicate parents not to believe strongly a powerful change with their child until after the first four to five sittings. I consistently feel more appropriate when the doctor is conferred first about a medicine cutback/withdrawal program.

However, he did come into sight to me to be doing absolutely fine at this point.

I processed in the left posterior chest area, and the burden was considerably made better. The nasal sinuses were still burdening but were in a more unlocked situation, admitting for suitable drainage. The patient's mother spoken that his nose was still oppressive in the morning. He completed the sitting at a seventy second cycle, near to our eighty second cycle target. At the fourth sitting his brain cycle grasped at seventy seconds. The burden in the left lung sensed much relaxed and was mainly limited to the lower posterior area in his back. The burden pattern doubtless begun here at the diaphragm level and traversed the trunk and neck into his sinuses. He completed this sitting at an eighty second brain cycle. His mother stated at this sitting that the cough he usually would have in the mid of winter was gone. He waited off his asthma medicines at this point. At the fifth sitting I still found burden in the lower left diaphragm area. This burden pattern made clear the fact that his mother said his asthma had been bad these past two years but did not know why.

The bicycle accident added one more layer of burden into the respiratory system that the body had to accord with, making it even more ambitious for him to breathe. Injuries, both evoked and erased, can build fascial burden patterns that can last a lifetime, if left untreated.²⁰ That area released without difficulty for him, and his brain cycle ended the sitting at eighty seconds. At the ensuing sitting his mother declared that he had fun football along with his brother and father currently in the cold air out of doors without coughing. This was an achievement for him. Dispassionately, he felt very well other than some chronic fascial burden in the lower left back area. He was clear during the whole of the rest of his respiratory system containing his nasal sinuses. At his seventh and final sitting, thirty days later his first sitting, his brain cycle was holding at ninety seconds. His mother said that he still had not required any medicine, and his cough had not come back. On one of the coldest days of the winter he was out of doors mince wood and playing football with his dad without appearance any manifestation of asthma.

In assessing his complete body, I processed on the lower left lung area to relieve as much resting burden as attainable. His brain cycle at this final sitting was one hundred seconds, a wonderful reading. His facial bones, sacrum, and dural tube were all moving without restriction and in harmony with his brain. His head was well-proportioned, and the respiratory system and the inactive of his body were quiet of any fascial

burden. He had ended his course of craniosacral fascial approach. Accurately five weeks after this therapy begun, his asthma doctor rechecks up him. She bring into being his lungs to be bright of any wheezing or other impediment. His peak flow meter readings were between 250 and 300 Liters/minute, which were in a satisfactory range for him. The physician suggested that at this point there was no requirement for any additional asthma medicines.

DISCUSSION

The conclusions in this case were absolutely usual of my clinical knowledge with pediatric asthma patients. This case needed eight one-hour visits, well within the typical range of four to eleven visits. In treating asthmatic children like this boy since 2012, I have found that pediatric asthma is connected with dysbalance of the craniosacral fascial system. In this case as in profuse another, since the respiratory tissues complicated with asthma are closely associated with other head and neck soft tissues, a child can have one major upper body craniosacral fascial burden resulting headaches, a nasal sinus condition, chronic earaches, a reading problem, and asthma – all at the identical time.²² Craniosacral and fascial injuries are frequently missed as hidden generative factors in chronic childhood diseases.^{20, 23, 24}

In pediatric asthma, the anatomical focal points for craniosacral fascial approach can be divided into three principal areas: the lung tissue, the vagus nerve, and the nasal sinus area. Fascia infuses during the entire of the tracheobronchial tree and lung tissue contrive over each structural cell. Since the fascial system of the body is one interconnected network, injury to the chest or adjacent areas may cause fascial tightness deeper in the lung tissue in general area the smooth muscle cells of the bronchioles. This narrowing can commit to the hypersensitive airways, which are principal feature of asthma. When this fascial burden is relieved over array of treatment sitting, these lung cells can come back to ordinary physiology, and the asthma can deplete consistently. Many asthma researchers have directed entirely on the physiology of the smooth muscle cells encircling the bronchioles. The deceitful reply to pediatric asthma may be in the physiology of its encircling endomysium that may absolutely supervise the function of the smooth muscle cell.

Basic research is required to check into thoroughly the hidden role the endomysium plays in pediatric asthma.²⁵ The subordinate treatment area is about the vagus nerve. Craniosacral neuropathology due

to head injury and misalignment can provoke the dorsal vagal nucleus and parasympathetic efferent fibers introduce asthma. Fascial burden, usually found deep in the upper neck just lower to the jugular foramen and deep to the mastoid process of the temporal bone, may also harm the vagus nerve. In the third treatment area about the nasal sinus area, facial injury can provoke the trigeminal and glossopharyngeal fibers resulting the identical parasympathetic action leading to asthma symptoms. Craniosacral fascial approach can also have therapeutic advantages in some adults with asthma. In the latter sequence of events that, airway remodeling due to chronic inflammation has likely to happen through that forty-year period developing irreversible loss, and the hidden for long lasting adjustment likely to happen no longer exists. This idea can help in making clear the greatly high rate of achievement with craniosacral fascial treatment in pediatric asthma. It comes into sight that the loss to the respiratory system caused by fascial burden early in life may be fully reversible, if treated immediately. The latent grace of this interdependent approach is that it crop up to address the pathological origin of asthma. The final advantage of clinical concern can switch the importance of therapy from managing and pursuing to regulate the disease with medicines to improving and put in place again the normal physiology of the child. Clinical research is critically required to build more conclusively the strength of this curative concept.

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