Case Study in Attention-Deficit/Hyperactivity Disorder: The Corrective Aspect of Craniosacral Fascial Therapy

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INTRODUCTION

Attention-deficit/hyperactivity disorder (ADHD) describes a range of pediatric behavioral disorders, including such symptoms as poor concentration, hyperactivity, and impulsivity. Approximately 1.6 million, or 7% of American children from ages six to 11, have been diagnosed with ADHD.[1] The prevalence of ADHD is three times more in boys than in girls.[1] Conventional treatment consists of behavioral interventions and the use of stimulants such as methylphenidate. Although these treatments can be very effective, recently concern has arisen over potential adverse cardiac side effects.[2] An alternative method of care includes the evaluation and treatment of the child's craniosacral fascial system as a contributing factor to the underlying neurological dysfunction. This system is an integration of the craniosacral and fascial or connective tissue components.

In 1899, William Sutherland, DO, discovered the craniosacral concept when he found that the brain had a slight "breathing" motion.[3] In the 1980s, John Upledger, DO, further found that cranial strain from trauma was primarily held in the meninges around the brain and not in the cranial bones.[4] From these findings grew an understanding that, in some cases, physical trauma can contribute to the development of neurological conditions such as ADHD, and that manipulative therapy could restore normal neurophysiology and health in many of these cases.

The fascial or connective tissue component of the craniosacral fascial system is a full body structural web that intertwines with every body tissue, including nerves, muscles, blood and lymph vessels, organs, and bones. Dysfunction in this system can lead to constriction in the flow of cerebrospinal fluid, which in turn can contribute to neurological dysfunction. Anatomically in this system, the cerebrospinal fluid begins in the choroid plexus of the ventricles, gently fluctuates through and around the cranial system, and then flows within the cranial and spinal nerve sheaths out into the fascial collagen tubules. The finding that cerebrospinal fluid is present in these tubules–with surprisingly no ordinary ground substance, blood, or lymph present–provides support for the theory of an interconnected craniosacral fascial system.[5]

The primary goal of craniosacral fascial therapy is to relieve the causative strain patterns around the brain. Traumas can occur anytime after conception, most notably due to the natural pressures and/or the mechanical intervention of birth. The brain cycle, the amount of seconds required for the brain to move through its inherent cycle of expansion and contraction, is the best indicator to measure the function of the craniosacral fascial system.[6] The clinical goal is a minimum brain cycle of 60 seconds, 30 seconds in the expansion phase, and 30 seconds in the contraction phase. Empirically we find that the longer the cycle of the brain's "breathing," the better it can function. As this case illustrates, craniosacral fascial manipulation can provide for some children with ADHD an alternative to long-term treatment with methylphenidate and their stimulant medications.

CASE PRESENTATION

History

RH, a 27-month-old boy, presented on November 8, 2006, for evaluation. His mother said his extreme hyperactive behavior necessitated the visit. He also had a history of ear pain and frequent rashes.

During her pregnancy with RH, his mother reported experiencing frequent premature contractions from five months onward. When her contractions became intense at seven months, she was admitted to the hospital overnight and given magnesium sulfate, which was successful in interrupting the premature labor. At eight months, she was injured in a minor automobile accident, which did not appear to affect her fetus. At 37 weeks, she had high blood pressure and could not sleep. Soon thereafter, she began having frequent strong but irregular contractions again, and her physician induced labor. The mother reported that during the final stages of labor when the head emerged, the doctor manually turned the head around to a more natural position. She also reported that on day two of life, "his body shook, and he did not eat." His blood sugar subsequently dropped precipitously, and he spent an extra day in the neonatal intensive care unit to recover.

The parents of RH first noticed unusual behavior at 18 months of age when he started to screech and bang his head. As time went on, he became easily distracted, would not listen, and could not focus on any task. His mother reported that he often pulled on his ears as if they were painful, although he never had an ear infection. His mother had observed that he would develop a rash while eating wheat cereal and upon exposure to certain chemicals around his home. He also often picked at the skin of his arm to the point where it became raw. RH was on no medications except for occasional acetaminophen for his ear pain and was up to date on his immunizations.

Shortly before her first presentation to our office, the mother had questioned her son's pediatrician about his bizarre behavior. The day care center had sent home a report saying that RH had spent an entire hour on one occasion washing his hands; based on this report his doctor was primarily concerned about a possible obsessive-compulsive disorder. The physician ordered a

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Developmental Assessment of Young Children test that showed RH was cognitively seven months behind his peers. The county health department then referred physical and occupational therapists to his home for weekly treatment.

The mother's decision to bring RH for treatment was the result of an incident at day care during which he became totally disruptive one day by biting other children and screeching. At this point his mother called me frantically saying that he had been "kicked out of day care" and asked to bring him for an evaluation as soon as possible.

Clinical Findings

At our first meeting, I held the cranium of RH for almost one minute and could not feel *any* perceptible motion. His brain cycle was zero or in a "locked down" state. His tight facial bones, sacrum, and dural tube were restricting the normal motion of his entire craniosacral fascial system. His left temporal bone was internally rotated, and his right temporal bone was externally rotated. The oral structures were not a factor.

I explained to his mother that he had severe craniosacral fascial strain, which was totally restricting the motion of his brain. I outlined a series of 30-minute visits to return his system to normal. At this point his mother was quite desperate and was ready to try any noninvasive approach.

Treatment and Results

The goal of his first treatment visit on November 8, 2006, was to help free his brain from the locked down state. His brain cycle opened to 15 seconds as the cranium became more symmetrical. His parents reported that his behavior improved significantly during the following week. During that time the allergist he was seeing also started him on a wheat-free diet. At the end of the second visit, his cycle was at 40 seconds, excellent progress from zero motion.

At his third visit, the fascial strains from the craniosacral fascial system contributing to his brain tightness started to release from the rest of his body. When therapy mitigated these strains over the next five visits, his cycle opened to 70 seconds. In between these visits, he broke out in rashes; this reaction is frequently seen during craniosacral fascial treatment and may represent the release of stored toxins through the skin. At the end of therapy, his brain, facial bones, sacrum, and dural tube were in synchronicity, and his head shape was symmetrical.

His mother reported that over this period "he became a different child." He was calmer and more attentive and ceased his head banging, screeching, and ear pulling. He also stopped biting other children and picking at his arm. His speech improved dramatically after the first three visits, with clearer enunciation and more coherent sentences. She was able to now touch his head with activities such as hair washing and combing without major protest. At his new day care center, his teachers did not believe that he had ever had a behavioral problem. He followed directions and participated in group functions without difficulty—as well as other children his age. His physical and occupational therapists also noted a major change in his demeanor. He did not abuse his older sister, and there was now peace in the home.

About four months later on the morning of May 17, 2007, RH fell approximately two feet from a table at school directly on the left side of his frontal bone. He was incoherent for about 10 seconds, started to gag four or five times, and then screamed for five minutes, louder than anyone at school had ever heard him. When his left eye started to droop and redden, the emergency room physician ordered a computed tomographic scan; this was read as normal.

For the next 10 days his behavior became more challenging at home; he started biting his sister again, screeched, and had conduct issues at the dinner table. When he also had more trouble at school and again began being rough with his classmates, yelling, not listening to directions, and not taking naps, his mother called me requesting a follow-up visit. Once again I found his brain cycle severely restricted. Because of his previous therapy, the cranial dural meninges quickly released in one visit, opening to 100 seconds.

The next day RH's teacher told his mother that he was "a completely different little boy." He used words more than actions in conflicts and noticeably "thought of things before just doing them." That day he also took the longest nap he had ever taken. In the following weeks, he behaved better at home, talked more, and slept well. He stopped biting his older sister, and peace returned once again. Over the next nine months, I treated him again after each of three separate bad falls. In each case he presented with a single-digit brain cycle, and each time left the office symptom free, with a 100-second brain cycle. The quality of his brain motion appeared to directly mirror his neurophysiological state; as long as his brain was breathing well, he was healthy and happy.

DISCUSSION

Three important aspects appeared to contribute to RH's recovery. First, he avoided the toxic chemicals like fabric softeners, conventional laundry detergents and bathing soaps, and food colorings like red dye #2 that were causing his skin rashes. Secondly, his mother eliminated wheat products, which the allergist felt were aggravating his immune system. Lastly, craniosacral fascial therapy released the pressure around his brain, spinal cord, and fascial system to achieve neurological homeostasis.

Craniosacral fascial trauma may also contribute to many other conditions, including asthma, headache, otitis media, strabismus, dysphagia, rhinitis, epilepsy, gastroesophageal reflux, and colic.[6-8] Many children can experience correction of these illnesses as the strains are released over a series of visits. After seeing hundreds of children over 30 years with locked down brain cycles, I have found that this therapy can be a critical factor in the healing of the central nervous system. The slight physiological motion of the brain has a tremendous influence on its function.[8] Many children, like this child, may be instinctively pulling their ears and banging their heads to free up their own craniosacral fascial systems.

In my experience, moderately restricted brain cycle states are generally associated with asthma, otitis media, and headache; more severe restriction, as in RH's case, can lead to poor concentration, impulsiveness, hyperactivity, epilepsy, autism, and/or cerebral palsy. The nourishing flow of cerebrospinal fluid may be the

key.[9] Another hypothesis suggests that restriction in certain areas of the cerebrospinal fluid (CSF) circulation may contribute more commonly to certain conditions; for example, restriction in the midbrain area involving the aggregate of his basal ganglion (putamen, substantia nigra, caudate nucleus, globus pallidus, and subthalamic nucleus), cerebellum, thalamus, and/or hypothalamus, may more commonly be seen in children with ADHD.

With so little known in this field, and yet recurrent reports of major benefits in certain cases, basic research is urgently needed. If in fact such research substantiates a link between early traumas, craniosacral fascial restriction, and neurological dysfunction, we could envision a new dimension to preventative pediatric care. Birthing professionals, pediatricians, and family practitioners could be trained in evaluation of children for craniosacral dysfunction, and could then either refer them for proper care or become trained themselves to deliver that care. Neonates could be evaluated and treated immediately after birth, potentially eliminating many later cases of ADHD and other neurological dysfunction. Pediatricians and family practitioners could evaluate at well visits for any significant falls or other traumas that may have left a lasting cranial restriction, and then could address that preventatively before a problem had actually presented clinically as a sequelae of that trauma.

Given the rising incidence of ADHD, the reports of successful treatment using craniosacral fascial manipulation and other body-based approaches, and the growing concerns about adverse effects of long-term treatment with medication, a pilot study of this approach for ADHD is called for.

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