

Improvement in Physical Resilience and Management of ADHD in a 12-year-old Male under Chiropractic Care: A case report

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Abstract: *Objective/Clinical Features* A 12-year-old male presented for chiropractic care with the primary concerns of ADHD, a mood disorder, and growing pains in his legs that had started a month prior. The patient had stopped taking Methylphenidate ER 30mg two weeks prior to presenting. Nerve function tests were performed (including paraspinal thermography, surface EMG and heart rate variability analysis). A prone leg check revealed a short right leg of one half an inch.

The right C1 was taut and tender, and the patient was positive for right cervical syndrome. Cervical spine x-rays were performed (including AP, lateral and AP open mouth). Relevant EMG and thermography findings included significant mid spine hypotonicity and significant imbalance in neural regulation confirming dysautonomia.

Intervention/Outcomes The patient was seen twice a week for twelve weeks. During this time, Torque Release Technique (TRT) and analysis was used. After the 12 weeks, the patient was reassessed. The parents reported a decrease in leg pain, and a complete resolution of allergies and strep infection. The patient was less confrontational and generally has a more positive demeanor. The mid spine hypotonicity was returning to normal and there was a significant change seen in the thoraco-lumbar junction.

Conclusion Chiropractic care for the reduction of vertebral subluxations may result in an improvement in physical resilience and the severity of ADHD related symptomatology. Further research is required.

Indexing Terms: Chiropractic; Subluxation; Torque Release Technique; ADHD; resilience.

Introduction

What happens when a growing nervous system is placed under internal or external stress? While the answer to this is potentially as vast as chiropractic literature itself, certain narratives within chiropractic care make sense neuro-spinally and interpersonally.

Namely: we perceive our world through our nervous system. When our nervous system is not functioning optimally, this can alter our perception of our environment, and thus how we interact with it and with others.

Therefore, chiropractic care may not just have a positive impact on neuro-spinal function, but also potentially plays a key role in mental health and the quality of relationships. Essentially, this draws a link between chiropractic care and adaptability: the well-adjusted nervous system can respond better to

... The reduction of vertebral subluxations with significant change in the thoracolumbar junction, was concomitant with a significant change in this young patient's symptomatology spanning mood, behaviour, allergies, and pain...



the environment around it.

The present case starts from a significantly different beginning point: mood disturbances, allergies, pain, and the main presenting concern, ADHD.

While the aetiology of ADHD is still debated, chiropractic case study data has indicated that improvements in ADHD symptoms, including hyperactivity, impulsivity, inattentiveness, and social, behavioural, or emotional difficulties, have occurred under chiropractic care. (1, 2, 3) Far from being an isolated case, case study data appear to link with other research indicating improvements in learning and behavioural impairments due to neurological dysfunction may occur under chiropractic care. (4)

While larger studies may be required before generalised claims might be made to the general public, these studies offer the groundwork upon which further research can be done.

The question in point is this: does subluxation-based chiropractic care increase the nervous system's ability to adapt to its environment?

Background

A 12-year-old male presented for chiropractic care primarily for ADHD, a mood disorder, and growing pain management. His ADHD symptoms included hyperactivity issues and difficulty concentrating. He also suffered from 'growing pains' in his legs starting approximately one month previous. The patient had stopped taking *Methylphenidate ER* 30mg two weeks prior to his presentation at the chiropractic clinic. His mother stated that he had been taking ADHD medication for the three years in the lead up to the chiropractic consultation.

Previously used prescriptions included *Vyvanse* and *Intuniv*. These medications had been stopped due to side-effects which had left the patient withdrawn and depressed. He had repetitive strep throat infections upon commencement of elementary school up until the examination and had suffered from 'a couple' of ear infections. His mother estimated that the number of antibiotic prescriptions he had been given were in the double digits, and too many for the mother to recall. He had a surgical history of a tonsillectomy and adenoidectomy three years prior, at age nine.

The goals for care included improved mood and attention. Potentially relevant birth history included an induced birth due to low amniotic fluid and the mother being one week overdue. An epidural was administered during the birth.

Examination

A battery of tests was used to establish the appropriate approaches to care. Nerve function tests were performed (including paraspinal thermography, surface EMG and heart rate variability analysis). A prone leg check revealed a short right leg of one half an inch.

The right C1 was taut and tender, and the patient was positive for right cervical syndrome. Cervical spine x-rays were performed (including AP, lateral and AP open mouth). Relevant EMG and thermography findings included significant mid spine hypotonicity and significant imbalance in neural regulation confirming dysautonomia.

Management

Following the examination, a course of chiropractic care was proposed in which the patient was seen twice a week for twelve weeks. During this time, *Torque Release Technique* (TRT) and analysis was used. This was chosen as there are previous case studies that show the TRT analysis can be beneficial to aid the chiropractor in vertebral subluxation correction in individuals diagnosed with ADHD and the attending chiropractor wanted to see if these positive results could be replicated with this patient.

Each session of TRT included the functional leg length reflex test to ensure effective treatment. After an initial phase of care consisting of 12 visits a re-evaluation was performed.

Outcomes

Parent-reported outcomes included a decrease in leg pain, sneezing fits, itchy eyes, and a complete resolution of allergies and strep infections. He was less confrontational, calmer and more affectionate, and had a happier demeanour.

Clinical findings at the 12-session re-evaluation included a substantial change occurring in the upper cervical region at C1. The mid spine hypotonicity was returning to normal, indicating the nervous system was moving away from a state of exhaustion and instead towards a state of increased neuro-motor signal and function (neural nourishment).

Upon re-examination after 12 visits to correct and reduce vertebral subluxations, a significant change was seen in the thoracolumbar junction, which was concomitant with a significant change in his symptomatology spanning mood, behaviour, allergies, and pain.

Discussion

After one phase of chiropractic care consisting of 12 visits, it is apparent the child's nervous system is changing and moving towards a state of increased function and ease. Healthy autonomic function dictates the body's ability to respond and adapt to ever changing internal and external environments. Improvement in symptomatology is a sign of improvement in the allopathic community, yet the additional improvements in function are signs of increased function in the salutogenic model. This case exemplified both.

Further research is required to define and explain the mechanisms behind the improvement, and to generalise findings to the wider population. However, this case report provides insight into the potential links between nervous system function and conditions such as ADHD.

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About the Chiropractor

Dr. Bruce Steinberg graduated from the Palmer College of Chiropractic in 2006 and has been in practice since. He is a member of the *New York State Chiropractic Board*, the *International Federation of Chiropractic Organisations*, the *International Chiropractic Pediatric Association*, and more. His reputable career in chiropractic includes running a successful chiropractic practice, *Quantum Chiropractic*, and serving the chiropractic community through his involvement with foundations and organisations serving the profession locally and internationally.

About the Case Report project

This Case Report is a part of the [ASRF Case Report Project 2021](#), a project designed to gather client studies from chiropractors and transform them into much-needed case reports, focused on the effects of chiropractic care on clinical presentations highly relevant to chiropractic, such as stress, immunity and adaptability. This project was made possible by the generous fundraising and contributions of ASRF supporters.

