

Improved physical adaptability in a 3.5-year-old female with an abnormal Birth History: A case report

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Abstract: *Objective/Clinical Features* A 3½ year old female presented for chiropractic care with primary complaints of flat feet, bed wetting and poor balance. Additional health history included eczema, repetitive ear infections requiring antibiotic medication, and a difficult birth history. Subluxations through the cervical and thoracic spine were noted.

Intervention/Outcomes A course of chiropractic care for the resolution of vertebral subluxation commenced, during which Activator Methods and Diversified Technique were used to adjust subluxations. The course of care was concomitant with a significant reduction in symptomatology which included digestion, mood, attention, and bedwetting.

Conclusion Chiropractic care may be associated with improved mood, attention, digestion and bedwetting. Further research is required to isolate the mechanisms behind such improvements.

Indexing Terms: Chiropractic; Subluxation; adaptability; Activator Methods™; *phrenic* nerve.

Introduction

Adaptability is a topic widely discussed in chiropractic circles. While a single, concise definition is yet to be distilled, it is broadly thought of as the ability of a person's nervous system to respond to its environment. The lower our adaptability as an organism, the greater our chances of succumbing to the challenges faced in our internal or external environment.

In terms of measuring adaptability, there are increasing conversations around clinical tools that may be used to measure this. One measure of reduced adaptability is the presence of a vertebral subluxation. *The Australian Spinal Research Foundation* defines the Vertebral Subluxation as 'A diminished state of being, comprising a state of reduced coherence, altered biomechanical function, altered neurological function and altered adaptability.' (1)

While objective measures of nervous system adaptability are still being discovered, the presence of subluxation is routinely measured by palpation, postural assessment, and thermography. (2) It could be argued that changes in

... A child with multiple levels of subluxation responded well to conservative chiropractic care using Activator Methods™. A role is proposed for the phrenic nerve in the resolution of nocturnal enuresis ...!



a patient's symptomatology and vertebral subluxation listings could also be measures of adaptability.

In line with this, it is proposed that this case, in which postural assessments, palpation, and thermography pre, during, and post chiropractic care for vertebral subluxation, coincided with improvements in a wide variety of seemingly disconnected symptoms and may indicate an overall improvement in physical adaptability.

Background

A 3½ year-old female presented at a chiropractic practice with primary complaints of flat feet, bed wetting, and poor balance. She had no history of chiropractic care, and her caregiver reported that she fell often. One week prior to presenting for care, she had done so and lost a tooth in the fall. It was also reported that she had behavioural issues (difficulties concentrating and prone to distraction) as well as eczema on her chin and wrist. While she had a history of ear infections requiring antibiotics, her medical history did not include any major falls, injuries or accidents, injuries to the spine or nervous system, allergies, or history of surgeries.

Her caregivers supplemented her diet with Vitamin D3, fish oil, and probiotics daily, and ensured her diet did not include excessive sugar. On a scale of low, moderate, or high, her activity levels were described as high. On a scale of stressful, average, good or excellent, her relationships with family members and other children were described as excellent, but her ability to learn in a classroom was described as average. Possible stressors included having moved to a new home two months prior.

During gestation, her mother experienced abnormal bleeding and a thyroid condition, and used alcohol and tobacco products during the first two months of pregnancy prior to discovering the pregnancy. The baby was born at 39-weeks' gestation in a planned caesarean section. The infant was breastfed for nine months and underwent a full schedule of recommended vaccinations.

Examination

Upon initial observation, the chiropractor confirmed eczema on the wrist and chin, and observed redness under her nose. All other visual presentations were within normal limits, as were her cervical, thoracic, and lumbar range of motion measurements. Her neurological tests were unremarkable, with no numbness, paraesthesia or muscle weakness, and no evidence of hypo/hyper reflexia. Orthopaedic tests were also unremarkable.

The chiropractor identified subluxations at the levels of C1/C2, T1/T2, T11/T12. Thermography scans revealed 'severe' subluxations at C2-C4, T4-L3 and S1, and 'moderate' subluxations at C1, C5, T1 and L5. Subluxations at C6 and T2-T3 were listed as 'mild'.

Anterior postural assessment revealed that her head shift was 0.45 inch (1.14 cm) to left and tilted 6.4° to left. A shoulder tilt 3.2° to the left was also discovered. Total shifts of 0.57 inches (1.45 cm) and total tilts of 9.6° were found. Lateral postural assessment revealed a head shift of 0.47 inches (1.19 cm) posterior, and an anterior hip shift of 0.23 inches (0.58cm). Total shifts of 0.79 inches (2.01 cm) and total tilts of 7.2° were noted on the lateral postural assessment.

Management

Following assessment, the patient underwent subluxation-based care to address these concerns. Diversified Technique and Activator methods were used to deploy an age-appropriate level of force and her care plan progressed at a frequency of one session per week for 12 weeks.

Outcomes

Following 6 sessions of care, a review session was undertaken. At this point, subjective (self/caregiver reported) changes included increased energy and activity, improvements in behavioural concerns, improved moods and digestion, a reduction in skin irritation and bed wetting and a complete resolution of the eczema on her wrist.

Thermography revealed a significant improvement in subluxation readings, with no subluxations returning a severe rating. Moderate subluxations were noted at T5/T6, and mild subluxations about T1-T4 and T7-T10.

After the 12th week of care we undertook a second review. At this review subjective improvements included a further increase in activity, energy and moods, along with caregiver reported improvements in sleep, digestion, and coordination.

A postural re-assessment revealed also significant improvements, with an anterior assessment revealing head tilt returning towards the right (at 1.3° right), and shoulders shifting 0.38" to the right. Her hips had also shifted 0.32" to the right. This equated to total anterior-view shifts of 0.7 inches (1.78cm) and total tilts of 1.3°. A lateral reassessment revealed total shifts of 0.42 inches (1.07cm) and total tilts of 1.8° with hips shifting 0.22 inches (0.56cm) forward.

Discussion

This case report is indicative of the impacts of subluxation-based care on global function, as indicated by widespread improvements across posture, digestion, mood, attention, coordination, and more. While case report data cannot confirm a mechanism behind such improvements, it is noteworthy that the patient appeared to show improvements in her ability to respond and adapt to her environment, both internally and externally.

The attending chiropractor noted that *'although we always hope to see symptomatic change, our focus is not on the secondary effects. We use the same subluxation analysis process on each patient, this is no different in this case.'*

Also of note is the potential involvement of the phrenic nerve in the aetiology of this presentation of nocturnal enuresis. The *phrenic* nerve originates from the cervical nerves between C3-C5 and is responsible for the phrenic reflex (a response that prevents sphincters from opening during the night). Subluxation of these vertebrae can cause nerve interference, disrupting the proper function of the phrenic reflex and therefore contributing to bed wetting. The correction of vertebral subluxations may influence the return of proper phrenic nerve function.

Enhanced nervous system function, autonomic function in particular, is likely more responsible for the improvements noted. However, further research is needed to confirm and define the precise mechanisms behind such improvements.

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About the Chiropractors

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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.

