

Chiropractic Care of a Two Year-Old Diagnosed with Reflux and a Hiatal Hernia: A case report.

Martin G. Rosen, DC, Charles L. Blum, DC

Introduction:

Approximately 4 million babies born in the U.S. each year, up to 35% with reflux in the first few months of life, which may resolve by their first birthday yet some will never outgrow the condition. Beyond infancy, up to one fourth of children and adolescents have recurrent abdominal pain, whereas only 5% report heartburn or epigastric pain ¹. Surgical treatment (fundoplication) has mortality rates up to 4.7% with 6% having postoperative complications ². Therefore the onset of gastroesophageal reflux (GER) and hiatal hernia (HH) symptoms are on the rise in the pediatric population. The use of prescription medication including: Prevacid, Prilosec and Nexium in treating these conditions are generally not only ineffective but do not address the cause or complications of these issues.

“Gastroesophageal reflux, usually with associated hiatal hernia, is recognized as a cause of disabling esophageal and respiratory complications in all age groups; but, until recently, it has been thought to be an unusual problem in infants and children. Respiratory complications, now appreciated with increased frequency in the adult population, may also occur in the pediatric age group ³.” In a study by Gorenstein et. al., “among 718 children with GER, 45 children (6%) with associated HH were retrospectively studied. They were divided into those with neurologically normal development (NN, n = 35) and those with neurologic disorders (ND, n = 10). Presence of HH in children with GER is associated with prolonged exposure of the esophagus to acid and a high failure rate of nonoperative treatment. However, medical treatment should be tried in NN children despite the significant failure rate ⁴.”

Case History:

On August 31, 2009 her parents brought a one-year old female infant to my office for evaluation. Her initial symptoms and diagnosis as reported to me by her mother, was as follows: esophageal reflux, hiatal hernia, she did not sleep more than 1.5 hours at a time, would not (or could not) eat solid food, she did not crawl as an infant, she could not lay down flat (prone or supine), threw up constantly, and had “slow gastric emptying with no obstruction”, was continually irritable, often screamed and cried and was inconsolable.

Her previous treatment included: dietary changes (dairy and soy formulas tried, Alimentum and Neonate formulas also did not work), Prilosec, Preacid and Nexium eased her discomfort at night but did not help her eat. She was also put on Reglan for 2 days but had a negative reaction! An endoscopy was performed and rectal polyps were removed. When she entered my office she was taking 20mg of Nexium per day plus ½ a teaspoon of Miralox once per day. None of her symptoms had responded favorably to the above treatments.

Methods/Intervention:

Using Sacro Occipital Technique (SOT) spinal, cranial and chiropractic manipulative reflex technique (CMRT) adjusting protocols with this patient all of her initial symptoms resolved. Also she was able to reset her pre-programmed proprioceptive feedback loop and she started to crawl for the first time in her life. ("Traumatization of the suboccipital structures inhibits functioning of the proprioceptive feedback loops. The motor development, though preprogrammed, cannot develop normally. These systems are fault tolerant and able to overcome considerable difficulties and restricted working conditions. But the price for this is a reduced capacity to absorb additional stress later. These children may show only minor symptoms in the first months of their life but later on at the age of 5 or 6 they suffer from headaches, postural problems or diffuse symptoms like sleep disorders, being unable to concentrate etc. ("Journal of Manual Medicine, Springer - Verlag 1992). (There is a remarkable 240% increase in the size of the cerebellum in the first year. Although the relations between the size of brain structures and specific cognitive functions are not always clear, area size can influence performance of modality specific behaviors (Leingartner et al., 2007). Because the cerebellum is critically involved in motor coordination and balance (Bastian and Thach, 2002), the striking cerebellar growth may underpin the rapid motor developments of infancy. The cerebellum has also been implicated in a plethora of other cognitive abilities including planning, set-shifting, language abilities, abstract reasoning, working memory, and visual-spatial organization (Schmahmann and Sherman, 1998).

Initially, I saw Bella twice per week for 6 weeks at which time an evaluation was done to determine the level of chiropractic care necessary to correct and stabilize her subluxation complex. Due to improvement in both her symptomatic and chiropractic findings her adjustment frequency was reduced to one time per week.

SOT chiropractic adjustments in the initial intensive care period (6 weeks) included correction of: a right occipital compression, an anterior sacrum on the right, viscerosomatic correction of T4 rotation and right lateral atlas subluxations. Using SOT pediatric evaluation and adjusting protocols the following visits addressed removing her presenting subluxation pattern and uncovering and correcting her primary pattern (the initial subluxation that caused the compensatory neurophysiological stresses). These adjustments included some of the aforementioned corrections plus underlying subluxation patterns at: C2, C4, T3 and the left ilium. Supportive CMRT procedures for the gall bladder, lungs, iliocecal area, diaphragm and hyoid bone were utilized when necessary. Cranial corrections were also made based on indicators to: the sphenobasilar mechanism (occiput and sphenoid).

Results:

After the first 3-4 visits the patient's symptoms began to subside, she did not cry in pain as often, her reflux and vomiting reduced dramatically, she no longer needed to take the prescribed medications and she was able to sleep through the night and did not wake up crying in pain. Continued care over the next 2 months mitigated her symptoms dramatically and she suffered only one exacerbation of her vomiting in 3 months.

After 9 visits, 4 weeks of care, Bella started crawling for the first time in her life. While she did begin to walk at 10.5 months her gait was unsteady and her hands were held stiff at her side, even after 2 months of walking. About a week after she began to crawl her gait became smoother and she began to use her hands in the proper cross pattern motion. Her mother also reported that her disposition became much calmer and her emotional outbursts were dramatically reduced. After 3 months of care the patient was able to eat solid food and was to swallow it without throwing up or choking. Bella remained under care for approximately one year with no recurrence of her symptoms at which time her mother decided to discontinue care and "see how she does without it."

Discussion:

This case report is attempting to illustrate how conservative chiropractic care might be effective in the treatment of children with symptoms associated with digestive issues such as GER, HH, and dysphagia. These common pediatric conditions affect the child and the entire family due to the incessant nature of the condition and the complicating factors that arise from their symptomatology. A recent survey study has found that chiropractic care, and particularly SOT chiropractic care, has been helpful in treatment of pediatric nonmusculoskeletal conditions such as GER or HH 5.

Conservative care for pediatric GER generally includes feeding modifications such as "a protein-hydrolysate formula thickened with one tablespoon of dry rice cereal per ounce, at restricted volumes. Positioning changes included avoidance of seated and supine positions. Elimination of all tobacco smoke exposure was advised 6." GER is not just a pediatric condition but has been found if untreated to lead to a lifelong disease. Therefore GER may require aggressive therapy early in life to reduce the risk of long-term sequelae 2.

While SOT's CMRT has methods of treating GER 7,8 and HH 9 other chiropractic methods may also offer options for pediatric patients with this condition 10-2. In a study (n=10) on adult patients with GERD referred by a gastroenterologist for chiropractic co-treatment endoscopy examinations performed after 8 sessions of CMRT chiropractic treatment for gastric syndrome found significant global reduction of GERD symptoms 7.

As with all case studies it is not appropriate to generalize finding of one patient to the whole population at large. This is because case studies do not have controls and comparative studies to rule out confounding conditions such as effects relating to placebos, ideomotor, or regression to a mean. Yet with the difficulty in studying the pediatric population and the lack of clear knowledge with the effect of medications on this group, low risk, and low cost, conservative options are worthy of consideration.

While it is possible that the child might have just outgrown her condition without care, the parents were not satisfied with her progress and the distress this had on both their child and home life. The temporal nature of the care rendered coinciding with the child's ability to eat, sleep and not take medication was remarkable from the standpoints of the doctor and parents. Since the child's condition was stable and on some degree worsening, this change most reasonably seemed related to the care rendered since there were no other variables.

Conclusions:

The findings from this study suggest that a subset of pediatric patients with GER and HH may benefit from SOT, CMRT, and cranial care. With parents who do not want to follow a "wait and see" approach for their children's care a short period of trial therapy which may function as a diagnostic test and a viable option to GER and HH that may be reasonable for gastroesophageal related pain that is unremitting in a young child. Further studies could involve comparative studies with control or children treated with alternative allopathic care.

References:

1. Rudolph CD, Mazur LJ, Liptak GS, Baker RD, Boyle JT, Colletti RB, Gerson WT, Werlin SL. Guidelines for evaluation and treatment of gastroesophageal reflux in infants and children: recommendations of the North American Society for Pediatric Gastroenterology and Nutrition. *J Pediatr Gastroenterol Nutr.* 2001; 32 (suppl): S1-S31.
2. Shalaby TM, Orenstein SR. Efficacy of telephone teaching of conservative therapy for infants with symptomatic gastroesophageal reflux referred by pediatricians to pediatric gastroenterologists. *J Pediatr.* 2003;142:57-61.
3. McNamara JJ, Paulson DL, Urschel HC Jr. Hiatal hernia and gastroesophageal reflux in children. *Pediatrics.* 1969 Apr;43(4):527-32.
4. Gorenstein A, Cohen AJ, Cordova Z, Witzling M, Krutman B, Serour F. Hiatal hernia in pediatric gastroesophageal reflux. *J Pediatr Gastroenterol Nutr.* 2001 Nov;33(5):554-7.
5. Rosen MG, Blum CL. Chiropractic care of pediatric nonmusculoskeletal conditions: A case series. *J Chiro Ed. Spr* 2011;25(1):116.

6.Gremse DA. GERD in the pediatric patient: management considerations. *MedGenMed*. 2004 May 5;6(2):13.

7. Dal Bello F, Dal Bello V, Santos LN, Raupp JM. Alterations on Dyspeptic Signs and Symptoms on Patients Presenting with Gastroesophageal Reflux Disease Submitted to Chiropractic Treatment. WFC'S 10th Biennial Congress. International Conference of Chiropractic Research. Montreal, Canada. Apr 30 – May 2, 2009: 290.

8.Klingensmith RD, Blum CL. Chiropractic manipulative reflex technique (CMRT) treatment for GERD of a 3 year old male child: A case report. Proceedings of the 2010 International Chiropractic Pediatric Association Research Conference. Washington, DC. October 21-24, 2010:55-6.

9.Mitchell GA, Blum CL. Sacro Occipital Technique Treatment of Hiatal (Hiatus) Hernia Presentation: A Case Report. *J Chiropr Ed*. 2011;25(1):114.

10. Alcantara J, Anderson R. Chiropractic care of a pediatric patient with symptoms associated with gastroesophageal reflux disease, fuss-cry-irritability with sleep disorder syndrome and irritable infant syndrome of musculoskeletal origin. *J Can Chiropr Assoc*. 2008 Dec;52(4):248-255.

11.Elster E. Sixteen infants with acid reflux and colic undergoing upper cervical chiropractic care to correct vertebral subluxation: A retrospective analysis of outcome [case report]. *J Pediatr Matern & Fam Health – Chiropr*. Spr 2009(2009:2):7.

12.Barnes TA. Chiropractic adjustments plus massage and kinesio taping in the care of an infant with gastroesophageal reflux. *J Clin Chiropr Pediatr*. Mar 2008(9:1): 572-5.