Full Spine Chiropractic Adjustment and the Successful Management of a “Lazy Eye”: A Case Study

By Gina M. Carucci, D.C., M.S., D.I.C.C.P.

Abstract
This case study involves a six-year-old female with a lazy eye and the application of full spine chiropractic adjustment in treatment of the subluxation complex and resultant improvement of the lazy eye. The review of literature demonstrates support of chiropractic in cranial nerve dysfunction.

Introduction
Lazy eye is a common dysfunction of the pediatric population. Care for this in the allopathic realm typically involves patching the stronger eye and using corrective lenses. Chiropractic management of this ocular dysfunction is congruent with the subluxation complex as neuro-pathophysiology, kinesiopathophysiology and myopathophysiology. Several case studies involving monocular visual changes, Bell’s Palsy and other cranial nerve dysfunction exist in the literature. Vascular insufficiency in the form of ischemia is one of the hypotheses for cranial nerve problems ameliorated by chiropractic adjustment. Others have identified actual cerebral cortical dominance secondary to cervical subluxation as a cause of functional neurological disturbances. Orienting (the coordinated movement of head, neck and body in response to visual stimulation) has been identified to be under the control of the superior colliculus in the brainstem and other interneuronal and motor connections. The role of the proprioceptive inputs from the suboccipital muscle spindles is considered part of the afferent mechanism in the control of head and neck posture and eye coordination. The role of chiropractic in restoring normal function with cranial nerve problems has been documented.

History
The child presented at our office with her mother for a lazy left eye. She had been diagnosed by her pediatrician two years prior and was being managed by a pediatric ophthalmologist. The medical treatment consisted of patching the strong eye and wearing corrective lenses. She was evaluated quarterly and prescribed new lenses annually.

The child’s health and developmental history is as follows. She was the first of twins born at 37 weeks by C-section to a primipara thirty-year-old mother in a stable marriage with the father of the child...
dren. At birth she weighed 5 pounds. Her twin brother weighed 5 pounds 2 ounces. Both babies had “good” APGAR’s as related by the mother. She was bottle fed with formula until she began consuming food at 8 months. She rolled over, sat up, crawled and walked at the age appropriate times according to her mother. She learned to read at five and was taking dance lessons since the age of four. She began kindergarten at age five, was a good student without educational, motor or social difficulty. She had excellent attendance at the private Catholic school in her town.

She was a “healthy child” with 4 ear infections and the “normal” gamut of childhood conditions including chicken pox and the common cold and flu. She had five prescriptions of antibiotics for the conditions mentioned above. She had been vaccinated according to the “usual” vaccine schedule as recommended by the Departments of Public Health and Education in the State of Connecticut.

Examination

Upon presentation to my office the following was noted: She ambulated normally and under her own accord. Her gait was normal and symmetrical. She was social and uninhibited in her participation in the history and physical exam. Her physical examination was essentially normal with the exception of eye tracking. Both eyes tracked poorly with the left eye being worse with medial deviation predominating. She demonstrated good hand eye coordination, motor strength and verbal skills. Her balance with one leg standing was weak on the left, i.e. she could stand longer on the right leg.

The Insight Millennium Thermal Scan and Surface EMG were utilized as part of the chiropractic examination in addition to static and motion palpation. Palpatory examination demonstrated subluxation as follows: C1-5 spinous right, lumbar 2-5 spinous left and a functionally short right leg.

Treatment

The child was treated with Diversified full spine adjustments and home coordination exercises consisting of cross crawl, one leg stance, hopping, jumping, one leg stance with eyes closed. Over the course of 8 adjustments a change was noticed in her oculocervical control with the left eye. She continued to be adjusted for the academic year after which time her mother discontinued care and she has not been seen since. At the time of her last chiropractic visit she continued to demonstrate sluggishness in the left eye with medial and lateral fields of gaze; however the control with these movements was improved and at her most recent ophthalmological examination she was not raised to a higher lenses prescription.

Results

The Insight Millennium Subluxation Station was utilized at the initial exam and one month later. Improvements were noted over the first month of care where paracervical muscle tone was reduced as was the paracervical surface temperatures. These results indicate improved neuromuscular control in this region and improved autonomic control with the raised threshold for reactivity in the autonomic system.

Discussion

The lazy eye syndrome frequently seen in the pediatric population is a condition that would best be co-treated by the pediatric ophthalmologist and the chiropractor. This functional neurological condition can be modified with the “best of both worlds” approach. The literature including case studies and basic neurological research demonstrate previous success in treating cranial nerve dysfunction and the pathways in which such care operates. The literature reviewed for this paper is a small example of published material available but gives credence to the significance of the functional neurological condition before the pathological change occurs and thus supports the subluxation paradigm of chiropractic.

References


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Council Members Help Advance Chiropractic

It is always encouraging to read about Council members who are making inroads in their communities and giving chiropractic care for kids and pregnant women positive publicity through their practices or by getting involved in different activities. Recently two members made the news, one in Connecticut and the other in New York.

Brian Applebee, DC, MS, DICCP from Danbury, Conn., was featured on the front page of the NewsTimes LIVE.com. “Everything Kids” newsletter in an interesting article with the title, “Children’s chiropractor has a busy Danbury office.”

The article, written by Fiona Temple, started off by saying that it might come as a surprise but chiropractic “which is usually associated with back trouble can help with problems ranging from asthma to difficulty in sleeping.” The author relates how Amanda Forbes, mother of six-year-old Jack, went to Dr. Applebee because she was “at her wit’s end.” At three months Jack had started waking up every hour at night and by the time he was six months, Amanda, desperate because no one seemed to be able to help her or her child, came to see Dr. Applebee. Dr. Applebee explained to Amanda that “birthing trauma had caused Jack’s neck vertebrae to move out of the correct position and this made it uncomfortable for him to lie down. Dr. Applebee’s therapy put things right,” Temple wrote.

The mother told Temple that Dr. Applebee took the time to explain exactly how chiropractic worked and after Dr. Applebee’s care, “Jack’s sleeping habits improved dramatically. Our little man,” said Amanda, “is a happier, healthier baby thanks to the care and concern of Dr. Applebee.”

The writer goes on to explain what chiropractic is and how it works. She also describes his approach to new pediatric patients and how he reassures parents and kids by first demonstrating on a teddy bear what he is going to do.

“Dr. Applebee,” the writer wrote, “works hard to make every visit to his office a positive and enjoyable experience for everyone. The large open space is relaxing and welcoming. Music plays in the background and a cheerful corner is home to cozy sofas and a kids activity center. The thoughtful attention to detail is everywhere, from the beautiful lighting covers painted with clouds and blue sky to the cuddly elephant that looks as though it’s coming through the wall....”

The writer also mentions that Dr. Applebee is one of the only 130 board certified (DICCP) pediatric practitioners in the world. ■

Editor’s Note: Dr. Applebee received his Diplomate in Clinical Chiropractic Pediatrics (DICCP) from the ICA Pediatrics Council in 2002. He is one of the instructors for the DICCP program and will be teaching the module on Nutrition to the DICCP class (administered by the New Zealand College of Chiropractic) in Melbourne, Australia, October 14-15, 2006.

Joan Fallon, DC, FICCP is giving chiropractic care for kids publicity in a different way, by going out of the box. Dr. Fallon has written research papers, innumerable articles, the first textbook on chiropractic and pregnancy and the first Matrix of chiropractic care for the child. She has been recognized by the New York Senate for her original research on autism which is patented. Now she brings chiropractic and pediatrics to the notice of the public through another avenue — Americans’ favorite sport — baseball! Her latest book has nothing to do with chiropractic. It is titled “27—The Voice of the Yankee Fans.”

The book has already captured the interest of not only Yankee fans but also different groups, many of them involved with children. A foundation recently ordered 1,000 copies of the book to give away at a fundraising dinner!

In the author’s bio, on the inside cover, the Publishers write: Dr. Fallon has two major passions in her life, baseball and children. ‘Dr. Joan’ as she is called, has passed on her love of baseball and the Yankees to two generations of children in her chiropractic pediatrics office. She takes great pride in her chiropractic pediatric practice as she is able to help numerous children, many of whom have developmental disabilities.” They also mention her research and that with her patent she hopes to bring significant help to children with ADD, ADHD and autism in the near future.

The book is definitely different. It has compelling stories, photography and illustrations by the award-winning sports artist, James Fiorentino.

Dr. Fallon says she is amazed how this one book has brought to the notice of many parents as well as for-profit and non-profit organizations and foundations that chiropractic care for kids is legitimate and it is effective. “I encourage anyone who has a passion outside their practice, to do something about it,” said Dr. Fallon. “My passions are kids and Yankees. When I wrote the book I had no idea that it would snowball into anything so big. It is wonderful to see how doors that once seemed shut to chiropractic pediatrics have suddenly opened. There are ways for us to bring our discipline and what we do to the notice of the public. It just means that sometimes we have to look outside the box.” ■
Researchers Say Antibiotics Used During Infancy May Double Risk of Asthma in Childhood

A recent study on the use of antibiotics in infants under age one and the development of asthma should be of interest to chiropractic pediatric practitioners. According to this study, the use of even one course of antibiotics in an infant during the first year of life may double the risk of the child getting asthma later in childhood.

The research was conducted by researchers at the University of British Columbia, Vancouver, Canada, and their analysis published in the March 2006 issue of Chest, the journal of the American College of Chest Physicians.

The researchers found that children who were given even one course of antibiotics during their first year of life were twice as likely to get asthma than children who did not receive antibiotics. The use of multiple antibiotics further increased the risk of a child developing asthma.

“Antibiotic use in children has been found to coincide with an increased incidence of childhood asthma,” said lead author Carlo Marra, PharmD, PhD. “Although the causal nature between antibiotics and asthma is still unclear, our overall results show that treatment with at least one antibiotic as an infant appears to be associated with the development of childhood asthma,” she said.

The researchers reviewed seven studies that compared exposure to one antibiotic to no exposure in the first year of life. Of the 12,082 children included in the analysis, 1,817 cases of childhood asthma were reported. Overall, infants exposed to at least one course of antibiotics were twice as likely to develop asthma during child-

It’s Nashville in November!

If you missed Hawaii then you certainly don’t want to miss Nashville for the 2006 Annual Conference at the Opryland Resort, November 10-12, 2006. It is going to be a celebration — the 10th anniversary of the first Pediatric Diplomates in the profession! There will be a luncheon celebration on Saturday and everyone is welcome. The Council officers are getting together donations for a live auction, so if you have anything that you want to contribute please email Council officers Dr. Lora Tanis at drloratanis@verizon.net or Dr. Sharon Vallone at svaillonedc@aol.com.

There is a cruise on Friday evening on the famous General Jackson which should be a lot of fun with a four course dinner and a Broadway style show. The seating is on Tier I (the best level) and we have a dis-

The famous showboat “General Jackson”. Dr. Dawn Khoury bidding for a custom-made pediatric table made and donated by Dr. David Tanis at the New Orleans Pediatrics conference.

The Opryland Hotel captures the tradition and character of a region in three spectacular atriiums under glass. Everything in one place — restaurants, entertainment, shopping, even a flatbed boat to take you on a tour around the resort.

Our group rate is $155 single/double and the cut-off date is October 9, 2006.

The theme of this year’s conference is “Cultivating the passion,” and who better to start off the weekend than the person responsible for creating that passion in thousands of chiropractors practicing continued on page 8
The researchers also did a dose-response analysis. For this analysis they studied data from five studies which included 27,167 children and 3,392 asthma cases. For each additional course of antibiotics taken during the first year of life, results showed a significant overall odds ratio of 1.16 suggesting that additional course of antibiotics appeared to further increase the risk of asthma development in childhood.

“In children, antibiotics are commonly used to treat ear infections, upper respiratory tract infections and bronchitis, but not every childhood infection requires an antibiotic,” said the study’s co-author Fawziah Marra, MD. Current medical guidelines recommend that children under age 2 receive an antibiotic for diagnosed ear infection. “However,” added Dr. Marra, “the majority of upper respiratory tract infections and bronchitis is viral for which antibiotics are ineffective.”
Hawaii Conference

Doctors and students from practically every state in the US as well as New Zealand, Australia, Europe, UK, Israel, and a large contingent from Canada, came together in Maui for the Council’s 2005 Annual Conference. It was a weekend of excellent learning and loads of fun and sun at the Westin Resort, another beautiful site for a conference with cascading waterfalls and live flamingoes and graceful swans in the hotel lobby adding to the natural ambience.
**Effectiveness of High Back Belt Positioning Booster Seats in Side Impacts**

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Prince of Wales Medical Research Institute, University of New South Wales, Randwick, Australia

Traffic Inj Prev 2005 June;6(2):147-65

- **Objective**: The objective of this study is to evaluate the potential of high back booster seats to provide effective protection to children in side impacts.

- **Methods**: This article presents a series of side impact sled tests at a velocity change of 30.5 km/h and a peak deceleration of 15.2 using the Hybrid III 6-year-old dummy in two styles of commonly used high-back booster seats, a conventional polystyrene booster seat and a convertible child restraint/booster seat. A series of tests were also performed using alternative anchorage systems in combination with the boosters. Simulated side impact tests were conducted at 90 degrees and 45 degrees.

- **Results**: The booster seats tested were found to be too short for the 6-year-old dummy and head contact with the side door occurred in all 90 degree tests resulting in high HIC values. The greatest potential for achieving effective protection in side impact in this test series was observed when the convertible child restraint/booster was used in combination with a rigid anchorage system. Using this system, the body of the dummy was kept farther away from the door which resulted in a softer head impact with the side door.

- **Conclusions**: Results from this work indicate that current booster seats offer poor torso containment and no head protection for children within the recommended age range. They also showed that the level of protection provided by belt positioning booster seats can be improved through the use of rigid anchorage systems. However, for this potential to be fully realized, belt positioning booster seats must offer better containment of the occupant during impact.

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**The Course of Low Back Pain From Adolescence to Adulthood**

Lisa Hestbaek, DC, PhD, Charlotte Leboeuf-Yde, DC, MPH, PhD, Kristen Ohm Kyvik, MD, PhD, Claus Manniche, Dr. Med Sc

Spine 2006;31(4):468-472

- **Study Design**: Prospective study with 8-year-old follow-up

- **Objective**: To describe the evolution of low back pain from adolescence into adulthood.

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**Summary of Background Data**: High prevalence rates of low back pain among children and adolescents have been demonstrated in several studies, and it has been theorized that low back pain in childhood may have important consequences for future low back pain. It is important to understand the nature of such a link if effective preventive programs are to be established.

- **Methods**: Almost 10,000 Danish twins born between 1972 and 1982 were surveyed by means of postal questionnaires in 1994 and again in 2002. The questionnaires dealt with various aspects of general health including the prevalence of low back pain, classified according to number of days affected (0, 1-7, 8-30, >30).

- **Results**: Low back pain in adolescence was found to be a significant risk factor for low back pain in adulthood with odds ratios as high as four. We also demonstrated a dose-response association: the more days with low back pain at baseline, the higher the risk of future low back pain. Twenty-six percent of those with low back pain for more than 30 days during the baseline year also had more than 30 days with low back pain during the follow-up year. This was true for only 9% of the rest of the sample.

- **Conclusion**: Our study clearly demonstrates correlations between low back pain in childhood/adolescence and low back pain in adulthood. This should lead to a change in focus from the adult to the young population in relation to research, prevention, and treatment.

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**Snore-Associated Sleep Fragmentation in Infancy: Mental Development Effects and Contribution of Secondhand Cigarette Smoke Exposure**

HE Montgomery-Downs, D. Gonzal

Department of Psychology, West Virginia University.

Pediatrics March 2006;117(3):e496-502

- **Objective**: The link between sleep-disordered breathing and neurocognitive functioning in preschool and school-aged children now has been established clearly. Within these age groups, isolated studies have examined the potential effect of snoring without gas exchange abnormalities on aspects of cognitive competence. The goal of this study was to test the potential association between snoring and decrements in developmental performance among infants.

- **Methods**: Thirty-five healthy community infants (8.2±0.4 months) were administered the Bayley Scales of Infant Development, including the Mental Development Index (MDI), after standard, overnight research polysomnography.

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• Results: The apnea-hypopnea index for all infants was 0. Respiratory arousal index was significantly correlated with MDI. Snoring-associated arousal index accounted exclusively for this relationship; spontaneous arousals and those that were associated with central apnea and oxyhemoglobin desaturation episodes (> or =4%) were not significantly associated with the presence of objectively recorded snoring but was associated with an increase in arousal frequency in snoring infants.

• Conclusions: Infants with lower scores on a standardized mental development assessment had higher snoring-arousal indices. Because neither apnea nor hypopnea was present, these findings constitute additional evidence that snoring is not just an innocent noise during sleep in infants but may in fact represent the lower end of the disease spectrum associated with sleep-disordered breathing. Secondhand exposure to cigarette smoke may increase the deleterious effects of infant snoring.

Pelvic Girdle Pain and Lumbar Pain in Pregnancy: A Cohort Study of the Consequences In Terms of Health and Functioning

A Gutke et al
Spine, March 1 2006; 31(5):E149-E155

• Study Design: A cohort study in pregnancy
• Objective: To differentiate between pregnancy-related pelvic girdle pain (PPGP) and lumbar pain, and to study the prevalence of each syndrome and its consequences in terms of pain, functioning, and health.

• Summary of Background Data: When studying prevalence, etiology, and consequences, differentiation between PPGP and lumbar pain is important, and, to our knowledge, its consequences for functioning and health during pregnancy have not previously been studied.

• Methods: All women answered questionnaires (demographic data, EuroQol). Women with lumbopelvic pain completed the Oswestry Disability Index, pain intensity measures, in addition to undergoing a mechanical assessment of the lumbar spine, pain provocation tests, and active straight leg raising test.

• Results: Of 313 women, 194 had lumbopelvic pain. The PPGP subgroup comprised 54% of those women with lumbopelvic pain, lumbar pain 17%, and combined PPGP and lumbar pain 29%. Women having both PPGP and lumbar pain reported the highest consequences in terms of health and functioning.

• Conclusions: Pain intensity, disability, and health measurements differentiate subgroups of lumbopelvic pain in pregnancy.