Dynamic Chiropractic

Children in Crashes

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A few months ago I received a phone call from one of my former associates, Tao (first name). Tao had worked in my clinic in Pleasanton, California for more than a year prior to establishing his own successful practice in Phoenix, Arizona. The main purpose for the call was a consultation regarding the management of an infant who had been injured in a motor vehicle collision. Specifically, the insurance adjuster's attitude toward the claim was: "our chiropractic consultant informs us that it is unlikely that an infant can be injured in a motor vehicle collision, and therefore treatment of an infant after a motor vehicle collision is not likely to be reasonable or necessary."

Chiropractors who treat motor vehicle collision injuries, including those to children, are probably all too familiar with this attitude. Several years ago, I had the opportunity to testify in a case in which a seven-year-old child and a 22-month-old toddler were injured in a motor vehicle collision. The children were treated successfully by a chiropractor; the mother of the children was adamant that the chiropractic care for her children was necessary for the improvement of their condition caused by the motor vehicle collision. Yet the case went to trial because of the attitude by the insurance company and their chiropractic paper reviewer. They claimed that the children did not need the amount of care they received, and that the treating chiropractor's records could not justify the care he gave to the children.

One of the consequences of this trial was my generation of a chapter in a new book, Pediatric Chiropractic, edited by Anrig and Plaugher, Williams and Wilkins, 1998. From my initial literature search, I selected approximately 200 articles that I felt to be most relevant for chiropractors. In the process I learned a great deal, including the following:

Many of the concepts that pertain to adults in motor vehicle collisions also apply to children, including the basic principles of inertial acceleration/deceleration injuries, preparedness prior to impact, and rotation of the head or trunk prior to impact. Overall, studies indicate that the pattern of injury among children involved in motor vehicle collisions is similar to that of the general population.

However, these injuries to children can be unique because of the following factors:

1. child safety seats;

2. the increased size of the child's head as a proportion of overall body mass;

3. the child's ability to be restrained while facing rearward;

4. the use of seat belts designed for adults;

5. the use of lap belts without shoulder harnesses;

6. the reduced height of the developing pediatric pelvis;

7. the underdevelopment of the pediatric anterior superior iliac spine;

8. the higher center of gravity for the pediatric body;

9. the diminished development and strength of various spinal musculoskeletal components;

10. the ability to sit on adults' laps when traveling in a vehicle;

11. the probability that a child injured in a motor vehicle collision is unprepared for the collision or caught by surprise;

12. the more unfavorable head diameter to neck diameter ratio, as compared to adults.

I believe that each aspect of this uniqueness regarding child injuries during motor vehicle collisions should be understood by chiropractors so that they can adequately justify the appropriateness of treatment given to these injured children.

Motor vehicle collsion injuries are the leading cause for death in children older than one year of age, the leading cause of children's doctor visits, and the most common reason for admittance to hospital emergency departments. Motor vehicle accidents are the most frequent cause for injuries to children and young adults. Some examples:

- Of the 40,300 deaths related to motor vehicle collisions in 1992, 5.1% involved children under five years of age; 4.9% were children between aged 5-14.

- North American statistics consistently show that over the past 35 years, motor vehicle collisions have been the leading cause of mortality and morbidity among children 1-14 years of age.

- Motor vehicle collisions account for between 37-50% of the deaths among children and lead to significant morbidity among those who survive the collisions.

- Each year twice as many children are injured or killed while inside automobiles as are injured or killed outside automobiles. More children die from automobile trauma than from any disease in the United States.

- Preliminary statistics indicate that approximately 700 infants and toddlers were killed in automobile accidents in 1994 and another 75,000 were injured.

Injuries to children in motor vehicle collisions are prevalent. Experience has shown that chiropractic treatment of these injured children will often be met with resistance by those who are sent the health care bill. Therefore, my recommendations are:

1. Understand the biomechanical uniqueness of injury for each age group of children involved in in motor vehicle collisions.

2. Learn how to examine and document pediatric trauma, including daily charting.

3. Become proficient at managing/treating injuries in the small, delicate bodies of children.

Reference

Pediatric Chiropractic. Ed: Anrig C, Plaugher G. Williams and Wilkins, 1998.

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