Shaken Baby Syndrome

The term "Shaken Baby Syndrome (SBS)" describes the consequences that occur from the violent shaking of an infant or young child. When infants are shaken, their neck muscles are not strong enough to control their head movements. Shaking an infant can result in serious injuries, life-long disabilities, and death. Because the consequences are so severe, preventing SBS is of the utmost importance.

No reliable studies have been done to determine how many children are victims of SBS, but it is estimated that there are 1,000 to 1,500 cases of SBS per year in the United States (Alexander & Smith, 1998). Prevalence is underestimated because many cases of SBS are misdiagnosed - the symptoms can be vague and easily attributed to other causes, and parents rarely volunteer information about the shaking (Conway, 1998). Many States do not keep accurate records of the number of cases that are diagnosed correctly.

Diagnosis of Shaken Baby Syndrome

Diagnosis of SBS generally requires that:

- A physician is knowledgeable about SBS and considers it as one possible explanation for a child's symptoms
- Tests such as a Computed Tomography (CT) scan or Magnetic Resonance Imaging (MRI) are conducted to expose internal injuries characteristic of SBS (Alexander & Smith, 1998).

Factors Contributing to Shaken Baby Syndrome

Shaking a baby typically reflects a caregiver's:

- Frustration with the infant's behavior (frequently inconsolable crying)
- Lack of knowledge, skills or experience to appropriately cope with the infant's behavior
- Unrealistic expectations about the infant's behavior (Showers, 1999).

Caregivers who admit to shaking babies often say they became frustrated and angry with the baby's crying and shook the baby in an attempt to stop the crying. While many caregivers are unaware of the specific dangers of shaking, the act of shaking is so violent that other people observing the shaking would recognize it as dangerous (Conway, 1998). In some cases, the shaking is an isolated event, but many victims of SBS show signs of previous physical abuse, including previous shaking (Alexander & Smith, 1998).

Consequences of Shaken Baby Syndrome

Shaking an infant causes the brain to bang against the skull wall. The rapid movement of the head can result in bruising, bleeding and swelling in the brain (subdural hemorrhage and cerebral edema), bleeding behind the eyes (retinal hemorrhage), and tissue separation (diffuse axonal injury). Depending on the severity of the shaking, signs of SBS can range from relatively minor symptoms such as lethargy, vomiting, and irritability to major symptoms such as respiratory distress, seizures, and death (Conway, 1998).

Studies have shown that between 15 and 32 percent of SBS victims die (Alexander & Smith, 1998). This mortality rate is significantly higher than that for children who have fallen from heights up to four stories. Of the SBS survivors, 10 to 15 percent appear to be doing reasonably well on short-term follow up. The remaining 85 to 90 percent of survivors display problems such as developmental delays, neuro-motor impairments, and visual impairments (Alexander & Smith, 1998).

Possible Consequences of SBS

- Learning disabilities
- Behavioral problems
- Partial loss of vision or blindness
- Mental retardation
- Autism
- Cerebral palsy
- Paralysis
- Permanent vegetative state
- Death

The costs for treating SBS survivors are high. Estimates of medical expenses for each baby hospitalized as a result of SBS range between $75,000 and $95,000. The costs for one infant surviving 3 years with severe neurological damage are estimated to be $1 million (Showers, 1997). "One crucial question for society may be whether we want to pay up front for prevention and early intervention, or pay more later for the severe damages incurred by children and families" (Showers, 1997).

Victims and Caregivers Who Shake Infants

In reported cases, boys are more frequently shaken than girls; it is estimated that 60 to 82 percent of SBS victims are male

(Showers, 1999). Estimates differ somewhat regarding the age of SBS victims, but most are under the age of 1 year (many are under 6 months), and few cases have been reported for children older than 3 years (Alexander & Smith, 1998; Showers, 1999).

Most SBS victims are shaken by males. This differs from other forms of child abuse in which children are most frequently harmed by females. One study found that of those causing SBS:

- 40 percent were fathers or step-fathers
- 21 percent were boyfriends of the mother
- 21 percent were babysitters
- 13 percent were mothers (Starling, Holden & Jenny, 1995).

Overall, it is estimated that 65 to 90 percent of those who cause SBS are males (Showers, 1997).

Current Shaken Baby Syndrome Prevention Efforts

SBS prevention programs currently exist throughout the United States (Alexander & Smith, 1998). These prevention strategies often focus on educating current and potential parents and other caregivers about the dangers of shaking infants and what to do when a baby cries. Educational materials including brochures, posters, and videos have been produced and disseminated in places such as hospital maternity wards, pediatricians' offices, and resource and referral centers. Specific efforts to reach males have posted information on NFL game guides, milk cartons, and grocery bags (Showers, 1997).

Preventing SBS -
What To Do When a Baby Cries

- Check to see if the baby is hungry, needs a diaper changed, or is too hot or too cold
- Offer the baby a pacifier
- Hold the baby close and walk around
- Take the baby for a ride in a car or stroller
- Call someone to help you
- If nothing else works, put the baby in a safe place, such as a crib, and check on him every few minutes
- Never shake a baby!

The U.S. Army Family Advocacy Program has developed a presentation entitled "Better the Baby Cry Than the Baby Die: Preventing Shaken Baby Syndrome," and also has information about screening babysitters for the risk of SBS. The U.S. Air Force New Parent Support Program (NPSP) addresses SBS prevention in classes for expectant parents and home visits with pregnant women in high-risk families. The NPSP also uses a fathers' program developed by The National Center on Shaken Baby Syndrome entitled "Dads 101" that includes information about the prevention of SBS.

Future Shaken Baby Syndrome Prevention Efforts

There are numerous recommendations for expanding efforts to prevent SBS. These include:

- Conducting additional outreach to males of all ages as potential and current child caregivers (Showers, 1999).
- Including SBS prevention messages in all babysitter classes and day care licensing courses (Showers, 1999; Starling, Holden & Jenny, 1995).
- Emphasizing stress management, anger control, and realistic expectations of infants in addition to standard messages about the dangers of shaking (Alexander & Smith, 1998; Showers, 1999).

Never, Never, Never Shake a Baby
--Showers, 1999

References

Alexander, R.C. & Smith, W.L. (1998). Shaken baby syndrome. *Infants and Young Children, 10(3)*, 1-9.

Conway, E.E. (1998). Nonaccidental head injury in infants: "The shaken baby syndrome revisited." *Pediatric Annals, 27(10)*, 677-690.

Showers, J. (1997). *The national conference on shaken baby syndrome: A medical, legal, and prevention challenge*. Alexandria, VA: National Association of Children's Hospitals and Related Institutions.

Showers, J. (1999). *Never, never, never shake a baby: The challenges of shaken baby syndrome*. Alexandria, VA: National Association of Children's Hospitals and Related Institutions.

Starling, S.P., Jolden, J.R. & Jenny C. (1995). Abusive head trauma: The relationship of perpetrators to their victims. *Pediatrics, 95(2)*, 259-262.

National Organizations

The National Center on Shaken Baby Syndrome.
http://www.dontshake.com/

SBS Prevention Plus. http://www.sbsplus.com/

The Shaken Baby Alliance. http://www.shakenbaby.com/

Resources

For more information, contact the Military Family Resource Center (MFRC) at http://mfrc.calib.com or at:

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