# Suspected abusive head trauma: Guidelines for a multidisciplinary approach

Susan Bennett MD

Cases of suspected abusive head injury are invariably a challenge for all involved professionals. A multidisciplinary approach affords the opportunity to share complementary perspectives, roles and mandates that lead to a comprehensive case plan. While the investigation of suspected abusive head injury will frequently be initiated by the treating physician (usually the paediatrician), the quality and quantity of evidence gathered by social services and police are crucial if children are to be protected from the abuse, abusers are to be punished and miscarriages of justice are to be avoided.

The Multidisciplinary Guidelines on the Identification, Investigation and Management of Suspected Abusive Head Trauma (AHT) were developed by a multidisciplinary group to equip professionals in health services, child care and education, child protection, police services and the justice system with a tool to identify, investigate and initially manage cases of suspected AHT. They are intended to be generic enough to assist large or small communities in developing a response appropriate to their specific needs and resources. The core principle is that they should be used in the best interest of the child.

The guidelines have been a work in progress since May 1999, when the First Canadian Conference on Shaken Baby Syndrome (SBS) was held in Saskatoon, Saskatchewan. At the conference, a framework for a national strategy on SBS was developed. The three components of the strategy are the Joint Statement on Shaken Baby Syndrome (1), the present multidisciplinary guidelines and a communication network on AHT. The Saskatchewan Institute on Prevention of Handicaps provided the initial leadership in developing the three components of the national strategy. Many other agencies and individuals provided invaluable assistance and, thus, the development of the strategy has been a truly Canadian, multidisciplinary and multiagency effort.

As part of the third component of the strategy, the Child and Youth Maltreatment Section of the Canadian Paediatric Society was established in June 2004, and is committed to the review and dissemination of these guidelines as a priority project. To achieve this goal, the current Working Group was formed.

The guidelines have been written by leading Canadian experts, and extensively reviewed from both a medical and legal standpoint. They are based on current best knowledge and best practice, and have been endorsed by eight national organizations: the Canadian Association of Chiefs of Police, the Canadian Institute of Child Health, the Canadian Nurses Association, the Canadian Public Health Association, Chief Coroners and Medical Examiners of Canada, the Child Welfare League of Canada, The College of Family Physicians of Canada and The Saskatchewan Prevention Institute.

The characteristic findings of AHT include subdural hemorrhage, retinal hemorrhages and brain injury, particularly diffuse axonal injury, but these may not all be present. External signs of head trauma such as swelling, bruises and skull fractures are sometimes present. There may be signs of trauma elsewhere, such as bruises, and rib or long bone fractures. Since 1999, preference has been to move away from the term SBS to inflicted head trauma or AHT, recognizing that mechanisms other than shaking may be involved (eg, impact) and that shaking injuries have been documented in older children and even adults.

Cases of abusive head injury, although infrequent, are of great clinical significance, because a large proportion of them result in death or permanent neurological deficits. There were 51 cases of confirmed head injury secondary to suspected child maltreatment (abuse or neglect) reported through the Canadian Paediatric Surveillance Program in 2006 (2). The median age at presentation was five months and two-thirds were diagnosed as SBS. Mortality and morbidity were significant; in cases in which the outcome was known at time of discharge, 7% had died and 40% had neurological sequelae. The child, family and wider society also pay a price.

In an earlier study (3), physicians at 11 tertiary care paediatric hospitals in Canada confirmed physical harm in 364 infants in a review of SBS cases reported to child protection teams over a 10-year period between 1988 and 1998.

It could be argued that these statistics represent only the tip of the iceberg. The presentation of abusive head injury may be nonspecific without external evidence of injury and cases may be missed (4). Less severe cases of abusive head injury may not be brought to the attention of medical providers and, even when they are, they may not be recognized. There may be a failure by professionals to report suspected child abuse.

*Child and Youth Protection Program, Children's Hospital of Eastern Ontario and the Department of Pediatrics and Psychiatry, University of Ottawa, Ottawa, Ontario*

*Correspondence: Dr Susan Bennett, Children's Hospital of Eastern Ontario, 401 Smyth Road, Ottawa, Ontario K1H 8L1. Telephone 971-50-500-7937 (United Arab Emirates), e-mail bennett@cheo.on.ca*

*Accepted for publication November 21, 2007*

  

Unfortunately, intervention for AHT largely occurs after maltreatment has already taken place. Primary prevention is clearly preferable, and we now know much about the precipitants of AHT (5,6). A recent report (7) targeting new parents during their stay on maternity wards described a prevention program in which the incidence of SBS was reduced by almost one-half. British Columbia has just initiated the evaluation of a province-wide implementation of The Period of PURPLE Crying prevention program that approaches prevention through a 'three-dose' strategy of providing new parents with an understanding of the frustrating properties of normal crying and the dangers of shaking while in maternity wards, reinforcing the message through public health home visitors, and a media campaign. The goal is to bring about a cultural change in the societal approach to infant crying and SBS risk (8). Such studies are laying the groundwork for the next important step, the development of a Canadian National AHT Prevention Strategy through the Child and Youth Maltreatment Section of the Canadian Paediatric Society in collaboration with its partners.

The guidelines are available in PDF format on the Canadian Paediatric Society Web site at <www.cps.ca>.

## REFERENCES


1. Canadian Paediatric Society. Joint Statement on Shaken Baby Syndrome. Paediatr Child Health 2001;6:663-7.
2. Canadian Paediatric Society, Public Health Agency of Canada. Canadian Paediatric Surveillance Program, 2006 Results. Head injury secondary to suspected child maltreatment (abuse or neglect). <http://www.cps.ca/english/surveillance/CPSP/Studies/2006Results.pdf> (Version current at January 7, 2008).
3. King WJ, MacKay M, Sirnick A; Canadian Shaken Baby Study Group. Shaken baby syndrome in Canada: Clinical characteristics and outcomes of hospital cases. CMAJ 2003;168:155-9.
4. Jenny C, Hymel KP, Ritzen A, Reinert SE, Hay TC. Analysis of missed cases of abusive head trauma. JAMA 1999;281:621-6. (Erratum in 1999;282:29).
5. Barr RG, Trent RB, CrossJ. Age-related incidence curve of hospitalized shaken baby syndrome cases: convergent evidence or crying as a trigger to shaking. Child Abuse Negl 2006;30:7-16.
6. Lee C, Barr RG, Catherine N, Wicks A. Age-related incidence of publicly reported shaken baby syndrome cases: Is crying a trigger for shaking? J Dev Behav Pediatr 2007;28:288-93.
7. Dias MS, Smith K, DeGuehery K, Mazur P, Li V, Shaffer ML. Preventing abusive head trauma among infants and young children: A hospital-based, parent education program. Pediatrics 2005;115:e470-7.
8. National Center on Shaken Baby Syndrome. <http://www.dontshake.org> (Version current at January 14, 2007).