Biases, Mimicking Disorders Confound Child Abuse Dx

BY ERIK GOLDMAN
Contributing Writer

OLD GREENWICH, CONN. — Child abuse remains one of the most misdiagnosed problems in all of pediatrics, Dr. Cindy Christian said at a meeting of the Eastern Society for Pediatric Research.

On one hand, a lack of awareness of their own social biases, coupled with a lack of knowledge about disorders that can mimic signs of abuse, can mislead doctors to see child abuse where there is none. On the other hand, a tendency to believe what parents say and a reluctance to open up the Pandora's box of ugly family dynamics and legal actions can result in missed opportunities to protect at-risk children.

"It is a real challenge to recognize child abuse. We make the diagnoses based on physical exam and history. But in abuse situations, the person giving you the history may not be telling an accurate story, either because they know the actual history and they don't want to reveal it, or they're a nonoffending parent and they truly do not know," said Dr. Christian at the meeting, which was cosponsored by the Children's Hospital of Philadelphia. Dr. Christian is codirector of Safe Place: the Center for Child Protection and Health at the hospital.

"It is far easier for us to treat ear infections or ADHD than to open the scary box of possible child abuse," she said. The latter suddenly throws physicians into having to deal with social services, and creates a potentially adversarial relationship with the family. It is a complex situation that most physicians would rather avoid whenever possible.

At the same time, physicians often jump to wrong conclusions based on social, racial, and economic biases that they are unaware of holding, she noted.

A 1998 study looked at 173 children who were known victims of severe head injuries resulting from abuse (JAMA 1999;281:621-6). Investigators found that 54 (31%) had been misdiagnosed by a physician before an eventual, accurate diagnosis. Of these, 27% had been reinjured before the abuse was recognized. The missed cases shared certain characteristics: The children were white and lived in two-parent households of higher socioeconomic status.

"This suggests physician bias. If you're a white baby with two seemingly nice parents from a good neighborhood, you're more likely to be missed," Dr. Christian said.

Building on that study, Dr. Christian and her colleagues at CHOP undertook a 6-year review of 388 kids younger than age 3 years who were admitted to CHOP with either long-bone or skull fractures. The investigators looked at the physicians' determinations as to whether the injuries resulted from accident or abuse, or whether there was not enough information to make a clear determination. They also looked at the frequency with which CHOP doctors ordered skeletal surveys, an important first step in the work-up of abuse cases.

The CHOP physicians suspected abuse for 53% of the minority children, but for only 23% of the white children. Minority children were five times more likely to get a skeletal survey than were white children. "Socioeconomic status appeared to have no influence, but race certainly did," Dr. Christian said. "If you were black, you were three times more likely to be reported to child welfare agencies."

In reality, all of the cases under review involved accidental traumatic injuries.

Several clinical conditions can mimic the signs of child abuse, and these further confound efforts to improve accuracy of abuse detection. Metabolic bone diseases like osteogenesis imperfecta (OI), which predispose young children to multiple bone fractures, are a major confounding variable.

This so-called brittle bone syndrome typically reveals itself early in life: The patients' mean age at first fractures is 8 months. By the time children with OI reach 2 years of age, they've had multiple fractures. One-third of children with OI will have family histories of the disorder, but absence of family history cannot rule out this possibility.

The presence of multiple fractures will usually sound the child-abuse alarm for many clinicians, and Dr. Christian stressed the need for very careful work-up to rule out OI. "I ask the families to be very liberal about allowing skin biopsies, so we can look closely for collagen defects," she said. Diligent examination of x-rays is also critical. In true cases of OI, the x-rays usually show multiple sites of periosteal healing. The presence of several earlier healing or healed fractures, especially in an infant or toddler, is highly suggestive of true OI.

The existence of OI is well known to defense lawyers and is often evoked as an explanation for fractures that could be caused by abuse. But Dr. Christian pointed out that an accurate diagnosis of OI does not, de facto, rule out child abuse. A child could potentially have a metabolic skeletal disorder like OI and also have suffered abuse.

Parents or defense attorneys may try to attribute head injuries that are suggestive of abuse to accidental falls. Dr. Christian acknowledged that toddlers do fall frequently, and babies do roll off beds, actions that sometimes result in injury. However, it is unlikely that a toddler's routine tumble or a baby's roll off the mattress will lead to traumatic, life-threatening head injuries. Severe head trauma should always raise the index of suspicion.

The idea that postinjury brain damage in young children results from hemorrhage secondary to hypoxia rather than from the trauma itself is still common in child-abuse defense cases, she said, even though the originator of that concept—Dr. Jennian Geddes, a neuropathologist at the Royal London Hospital—retracted the hypothesis last year.

"Really bad science will ultimately be revealed as such," Dr. Christian said.

Clinicians may hesitate to report suspected child abuse, fearing that they may be overlooking something and that the injuries in question will ultimately prove to be from accidental causes. They are understandably averse to putting families through unnecessary investigations or legal proceedings.

But Dr. Christian pointed out that it is possible—and often advisable—to make a report of "reasonable cause to suspect child abuse" to child health services when the signs and history are suggestive but definitive proof is elusive. "Don't make definitive statements if you are not sure, but reasonable cause is reasonable cause, even in the face of controversy." For the sake of a child's safety, it is worth risking the chance that the suspicions may prove wrong.

She added that the chance of error and the influence of socioeconomic or racial bias can be minimized by taking a team approach to the initial assessment. Having several clinicians from different disciplines review a case will increase the odds of detecting subtle but important clues, while at the same time reducing the error potential posed by any one individual's unexamined beliefs and prejudices.

It can be uncomfortable for a physician to raise the possibility of child abuse, but it is important to do so when the clinical signs and history point to that conclusion, Dr. Christian said. "You need to use your voice to stand up for kids who are being abused." ■

Screen for Intimate Partner Abuse in Ped Emergency Visits

BY KATE JOHNSON
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CHICAGO — Screening for intimate partner violence among parents who bring their children into the emergency department is an active form of child abuse protection, Dr. Jane F. Knapp said at a meeting sponsored by the American College of Emergency Physicians.

"You can't treat children in isolation; you must treat them in the context of families," said Dr. Knapp, professor of pediatrics at the University of Missouri–Kansas City and a pediatric emergency physician at Children's Mercy Hospital in Kansas City, Mo.

This concept is becoming more widely accepted in the field of pediatrics, with major medical organizations currently recommending screening of parents by pediatricians. Making the leap from concept to application, however, remains daunting for many pediatric emergency physicians.

"We've kind of had our heads in the sand," she said, acknowledging many emergency physicians' fears that they do not have the training or resources to follow up on intimate partner abuse once they uncover it in a busy ED setting.

But a brief staff training curriculum can significantly change attitudes, self-efficacy, and clinical approaches to this problem, she concluded in a recent study (Pediatrics 2006;117:110-6).

Staff in a pediatric hospital underwent a 2-hour training program to prepare them to do screening for intimate partner violence (IPV) in their ED. A questionnaire administered before the training, immediately after, and at 6 months showed consistent, positive changes in attitudes and self-efficacy—with clinical behavior changes seen at 6 months, she said.

Dr. Knapp's group examined many dilemmas while developing its screening protocol and held focus groups, which included 59 mothers, 21 nurses, and 17 physicians (Arch. Pediatr. Adolesc. Med. 2002;156:794-9).

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Their conclusions included the acknowledgement that the child's medical needs must be addressed first and that the screening process must be minimally disruptive to the ED. Additionally, they said "resources must be available immediately to a victim who requests them."

However, after implementation of the screening protocol called "It's Time to Ask," a 9-month evaluation showed that out of 573 parents who acknowledged abuse from their intimate partners, 164 were lost to follow-up.

"That was a large number, and we knew we needed to improve that," Dr. Knapp said. Another 136 respondents claimed to have misunderstood the question when they were recontacted. "At first we thought this was a language problem, but now we feel that some of these people simply change their mind about revealing the violence," she said.

Of the 273 respondents who confirmed their original report of violence, 175 accepted information only, 69 accepted a social-work referral, 20 accepted a referral to community service for abuse, and 9 accepted specific actions such as shelter placements, filing charges, orders of protection, counseling referrals, or hotline calls, she said.

A training CD for Dr. Knapp's "It's Time to Ask" IPV screening protocol is available free of charge and can be obtained by e-mailing her at jknapp@cmh.edu, she said.

For physicians interested in developing their own protocol, there are many dilemmas to be considered and no consensus among experts, Dr. Knapp warned.

Although dealing with such delicate matters is an investment in time, Dr. Knapp encouraged emergency physicians to consider it time saved.

"If you take time to help a mother, you will help a child," she said. "Unless we break the cycle, we will be dealing with future health problems in children who witness IPV." ■