In the 1940’s and 1950’s, radiologists began to note suspicious limb and rib fractures associated with head injuries in infants. In 1962, the late C. Henry Kempe, M.D. and colleagues wrote an article for the Journal of the American Medical Association entitled "The Battered Child Syndrome". Public attention soon focused on the problems of the abused child (Rice et al., 1993).

Over the past 30 years, the medical literature has expanded to include thousands of studies and the development of increasingly sophisticated diagnostic techniques. Several publications (see reviews, this issue) do an admirable job of summarizing voluminous and technical medical literature concerning inflicted injuries. In this article, VCPN endeavors to extract medical information that should be known by all professionals working with abused children. VCPN’s short article, will by necessity, be incomplete. Readers are urged to obtain some of the excellent reference materials reviewed in this issue and read them carefully.

Abusive Head Injury

The leading cause of death among abused children is head injury (Annable, 1994; Levitt, Smith & Alexander, 1994; Smith, 1995). Furthermore, severe accidental head trauma is uncommon in children under 2 years of age. Only 20 percent or less of deaths from head trauma in children under 2 are due to accidental trauma (Bruce and Zimmerman, 1989). Death rates from fatal head injury compare to deaths from serious congenital heart disease and deaths due to HIV, while far exceeding the prevalence of childhood cancer deaths (Smith, 1995). Thus, abusive head injury is a major source of mortality for American children.

The incidence of abuse among children with serious head injuries appears high. One study of admissions to a Cincinnati hospital over a two year period found a high percentage of abusive injury in infants less than one year presenting with serious head injury. Excluding uncomplicated skull fractures, 64 percent of head injuries and 95 percent of serious intracranial injury were the result of child abuse.

In one study (Alexander et al., 1990), over 70 percent of victims of inflicted head trauma had evidence of prior abuse, neglect, or both. This included a quarter of the sample who had experienced multiple intra-cranial hemorrhages. Head injury differs from more visible forms of child abuse. It may be a single event. There may be no external signs of injury (Alexander et al., 1990). There may be no intent to harm the child. Not all children die as a result of abusive head trauma. Approximately 88 percent of children diagnosed with abusive head injury live (Smith, 1995). However, the immediate and delayed outcome of abusive head injury is worse than with any other cause of head injuries, in part because of ineffective treatment due to misdiagnosis. Early diagnosis can improve outcome (Author, 1984).

The possible means for inflicting an abusive head injury are several. Methods include, singularly or in combination, direct impact injuries, strangulation, malnutrition, and shaking. The later appears to be the most common method (Smith, 1995). Carole Jenny, M.D., of the Children’s Hospital in Denver, Colorado, comments “I think shaken baby syndrome and head trauma is most often missed.

These injuries can present like many other conditions.”

Direct impact injuries occur when high-speed objects hit a child’s head. Direct impact can be due to slapping, hitting with an object, punching or throwing an object and hitting the child’s head. Neglect of auto restraints can also cause head injury. Dropping a child from a great height is another possibility (Levitt, Smith and Alexander, 1994). If an object is irregular or hard enough, it can penetrate the scalp. Often such injuries arise from knives, glass or an object shaped like a spear. Choking or suffocating children, especially if repeated, can lead to cerebral atrophy, as blood flow and oxygen delivery is compromised. Damage from shaking can also occur during choking.

Diagnosis may be compounded by false history. The most frequent complaint offered by the caretaker is respiratory distress. Other observations by caretakers are lethargy, irritability, seizures or poor muscle tone (“floppy” or “limp”) (Ludwig & Warman, 1984). Infants can also present with seizures, failure to thrive, vomiting, coma or death (Dykx, 1986; Spaid & al., 1990; Wissow, 1990).

Several clues can alert the physician to the possibility of abuse. The literature is nearly unanimous that short falls of less than four feet are unlikely to cause serious brain injury (Smith, 1995). Serious injury requires serious trauma. Any child with serious head injury who has not been involved in an automobile accident or a fall from several stories should be considered a possible victim of child abuse.

In children with head injuries, computed tomography (CT) imaging will often delineate acute injuries not seen with other imaging methods. Magnetic resonance imaging, however, is more effective in dating subdural hematomas and will reveal lesions missed by CT imaging, especially 5 days or more after the initial injury (Jenny & Day, 1994). The presence of associated injuries can also support diagnosis. Approximately

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Prevent Child Abuse, Virginia

Child Abuse Prevention Month: Communities in Action

We get started in midsummer. First, a new file folder (blue, of course). Then, a label - Child Abuse Prevention Month, 1996 - Packet ideas. Gradually the folder fills up with the bits and pieces of awareness material that might make attractive and useful handouts. Another folder gets the returned survey sheets from 1995 from which we compile the list of who did what in Virginia last year. Child Abuse Prevention Month 1996 is underway, 9 months before its official beginning on April 1.

Child Abuse Prevention Month in Virginia is a community-friendly awareness effort. A coalition of interested organizations, headed by Virginia DSS and Prevent Child Abuse Virginia, compiles a packet of materials for community organizing, utilizing current statistics, a message from a celebrity chairman, information about special events during the month, and lots of public awareness material. Also included is information about the blue ribbon awareness campaign, which began in Virginia in 1990 and has since spread across the United States.

Copies of the packet are sent to state government offices dealing with children, extension offices, schools, recreation and parks organizations, hospitals, clubs and religious organizations, and to over 500 individuals who have been active in child abuse prevention efforts. The packet is funded by the Virginia Department of Social Services through a child abuse and neglect prevention challenge grant from the National Center on Child Abuse and Neglect, Administration for Children, Youth and Families, U.S. Department of Health and Human Services.

All material is copyright free and a majority of the sheets are printed on very light paper so that they work well on a copier or at a quick printer. By the time the overview is officially underway, about two thousand of the packets will have been mailed and several hundred more distributed at conferences and meetings. Once the packets reach their destination, usually in early January, creativity abounds in cities and boroughs across Virginia. A sampling of the early survey responses yields some interesting results.

Melanie Dunn-Chadwick of the Fairfax County Public Schools, Family and Early Childhood Education Program responded with two pages of activities that she put together for her colleagues - personal and professional. An article for her program newsletter was created using "What Can One Person Do to Prevent Child Abuse." Melanie added information about her own program into the article and even had it translated into Spanish. Teaching teams and office staff were given blue ribbons and most wore them throughout the month. Melanie also took materials to her church and distributed them to the parents' Sunday school class.

At Briarfield Elementary School in Newport News, Ann Campbell Robinson, made sure that school counselors throughout the system had prevention month material. She sent us a list of all counselors and their addresses and, in addition, spearheaded a coordinated observance which was outlined in a spiral-bound book, "Kindness Counts at School." Teachers received copies of "Indicators of Child Maltreatment" and elementary and middle school parents received "Tips at Report Card Time." At the Child-Parent Center in Winchester, Prevention Month means Doo Dah Day. Held this year on April 29, the family fun day is a major event in the region and a major fund-raiser for the Center. Special guests included Spider Man, McGruff and the uniquely Virginian Doo Dah Dragon.

In Richmond, Doris Deans, President of United Methodist Women made sure everyone in her church had access to prevention materials and blue ribbons. She was joined by United Methodist Women, groups across the Commonwealth, many of which have been on the mailing list for years. South of Richmond, in Matoaka, Carolyn Nimmot of the Matoaka Woman's Club writes that her group distributed information packets in school and the local library. The club also distributed blue ribbons and bookmarks to child care workers, county employees and club members. Sherry Coor of Greater Richmond SCAN launched an emotional neglect public awareness campaign. Billboards and television spots sported the message "What do your kids have to do to get your attention?"

A new activity launched this year was "Healthy Baby Week" which took place April 8-15th. Communities were asked to supply every family who delivered a baby with parenting information, a community resource list and a gift. In the Tidewater area, Sue Gibson of St. Mary's Infant Home gathered numerous people together and they were able deliver gift bags to 500 new parents in 15 hospitals. Also, public service ads with "home safety tips" were shown on television daily during April.

These activities are just the "tip of the iceberg" of April events on behalf of children and families. To be placed on the list for the 1996 Child Abuse Prevention Month Packet, please mail us your name and address and include a telephone number, just in case. A preliminary mailing will arrive some time in early fall, so please get your request to us by September 2.

Packets are fully reproducible and are meant to be shared, so please send only one name per office location. Mail to: Virginia Coalition for Child Abuse Prevention Month, P.O. Box 12308, Richmond, VA 23241.

Contact PCAV at:
P. O. Box 12308
Richmond, VA 23241
(804) 775-1777
(800) 257-VCAP
FAX (804) 775-0019
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half the children who suffer an abusive head injury have accompanying long bone fractures. Therefore, all children under age two with possible abusive head injury should receive a radiographic long bone study (Smith, 1995). Radiology is limited because significant brain injury can occur without evidence of a fracture (Bruce & Zimmerman, 1989). CT imagery can be helpful, however CT data underestimates the severity of injury. There are documented fatal cases of abusive head injury with normal CT. Thus, a normal CT does not exclude the possibility of head injury or of abuse. The converse is not true, however. It is rare that an abnormal CT will be associated with no or minimal symptoms (Smith, 1995). It is important to follow cases carefully for weeks as some brain injury develops gradually (Frank et al., 1985; Giangiacomo, et al., 1988).

Since retinal findings may be the only external clue to serious head injury and child abuse, a careful ophthalmologic evaluation is essential in the diagnosis of suspected abusive head injury (Annable, 1994; Apolo, 1987; Dykes, 1986; Giangiacomo & Burkett, 1985; Levitt, Smith & Alexander, 1994; Riffenburgh, et al., 1991; Wissow, 1990). Retinal hemorrhages are common, occurring in as many as 75 percent of cases. In some studies, retinal hemorrhages were seen only in infants with inflicted injuries (Billmire & Myers, 1985). Other oculomotor problems include detached retina and optic nerve injury (Lambert, Johnson & Hoyt, 1986), tears to the cornea, inflammation of the iris, glaucoma, and dislocation of the lens (Wissow, 1990).

Differential diagnosis of abusive head injury should rule out accidental injuries, metabolic disorders, pre-existing intracranial vascular abnormalities and sudden infant death syndrome (SIDS).

The overall outcome of children with abusive head injury is poor. Only a third emerge without handicapping conditions. Mortality is high, ranging from 12 to 27 percent. The remainder of victims experience conditions such as blindness, seizure disorders, mental retardation, or developmental delay, cerebral palsy, quadriplegia or even coma (Levitt, Smith & Alexander, 1994; Ludwig and Warman, 1984). Not only are many living children significantly impaired, but protection from further abuse is of paramount importance. Siblings also need protection (Alexander et al., 1990), as no effective treatment for perpetrators has been found (Bruce & Zimmerman, 1989; Smith, 1995).

Burns

Burns are among the most serious manifestations of child abuse. The mortality rate for children who are deliberately burned is as high as 80 percent; compared to a 2 percent death rate for children with accidental burns (Purdue & Hunt, 1992). Between 10 and 25 percent of pediatric burns are deliberately inflicted by adults, accounting for about 10 percent of all physical child abuse cases (Purdue & Hunt, 1992). Furthermore, there is some evidence that perpetrators who burn children are likely to reabuse the children, because of preméditation.

Infants and toddlers are at greatest risk for inflicted burns (Wissow, 1990). Infants under a year have limited mobility and climbing skills. While accidental scald burns are common, immersion burns that are accidental are rare for this age group. In children ages 5 and older, abuse by burning of any type is rare and when abuse occurs it is generally children who are neurologically impaired or have developmental deficits (Purdue & Hunt, 1992). Scald burns are the most common (Purdue & Hunt, 1992; Wissow, 1990). Scald burns may be immersion, random splash, or spill injuries.

Immersion burns result from falling into, being placed in or being forced down into hot liquid. Accidental immersion burns display splash marks, varying depths of burn, indistinct areas between burned and unburned skin and multiple burn areas caused by the child's struggle. In contrast, immersion burns show uniform depths, little evidence of motion (as the child is held down) and indistinct (although not "perfect") wound borders. In a few cases, areas in contact with the cooler tub bottom will be spared severe burning (Purdue & Hunt, 1992). There may be "stripes" of unburned skin if areas were flexed or bent so that the skin was pressed against other skin and thus, was not burned (Rice, et al., 1993).

Many children with inflicted immersion burns are burned on their buttocks. This is consistent with observations that problems with toilet training or soiling precipitate the abuse. Other likely areas for immersion burns are hands and feet.

Spill or "splash" injuries result when hot liquid falls or is poured from above onto a child. Pediatric burns caused by deliberate throwing or pouring hot liquid on a child are rare; in contrast to assaults by adults on other adults where throwing or pouring hot liquid is common. Instead, spill injuries to children are generally caused by placing the child under running hot tap water (Purdue & Hunt, 1992). Because children's skin is more sensitive, children can be burned at lower temperatures than adults. Thus some hot tap water that would not cause a burn to an adult will burn a child (Ludwig & Kornberg, 1992; Wissow, 1990). Accidental spill burns are more likely to affect the face or chest. Burns to extremities or buttocks are more likely to be inflicted. Spill burns are generally not as severe, since the liquid cools as it falls through the air and runs off the skin before severe damage is done (Rice, et al., 1993). Usually there are several small scattered, "satellite" burns.

Clothing or diapers may alter the pattern of the burns. Clothing may act to hold the hot liquid closer to the skin for a longer period of time, leading to burns in areas that would ordinarily be spared (Wissow, 1990). Diapers with an outer barrier layer may, on the other hand, offer protection against the scald burn (Purdue & Hunt, 1992).

Chemical burns are often deeper and more severe than scald burns. This is because the burning process continues as long as the substance is in contact with skin (Rice, et al.).

Flame burns are much less common. Inflicted flame burns are characterized by extreme depth in a fairly circumscribed area. One frequent site for inflicted open flame burns is between fingers or toes. The history given typically is not consistent with the injury.

Burns in the shape of hot solids (such as cigarettes, hair curlers, heating grates, irons) are highly suggestive of abuse. Accidental burns by such objects generally have a lack of apparent pattern, due to the child's movement as soon as contact is felt. Deliberately inflicted burns, on the other hand, often show a distinct outline of the object. (Very brief accidental contact with a hot object may produce a superficial second degree burn on the object pattern.) Cigarette burns may be confused with impetigo, although the depth of the lesion is greater with cigarette burns. Healed cigarette burns may appear as either darkened areas or absent of pigment (Rice et al., 1993). Infections, severe diaper rash and hypersensitivity reactions can sometimes be mistaken for intentional burns.

Suspicious burns include multiple burns of varying ages and types which could not have happened at the same time. Other inflicted injuries are present in about 20 percent of cases. Thus, long bone, chest and skull X-rays are recommended in cases of suspicions burns (Purdue & Hunt, 1992). A history of unexplained injuries or prior burns is also suspicious.

The history of the injury should be correlated with the observed pattern,
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burn depth and general burn appearance. The precise timing of the injury and its purported cause should be carefully noted. Blistering can take several hours to develop. Electrical or microwave burns transfer energy to deep tissue more than to the surface and internal damage may be greater than the obvious surface injury. Thus, burns need to be observed over time before conclusions are drawn (Wissow, 1990).

Burns incompatible with the child's developmental abilities are suspect. A carefully detailed history should include any prior trauma, developmental milestones, illness, immunization status, and status of routine medical care. The most common cause of death in burn cases is pneumonia. Poor nutritional status compromises healing.

Inflicted burns are more likely to be correlated with a delay in seeking medical treatment. Further inquiry is needed for burns attributed to actions of siblings or cases where someone other than the person present at the time of the injury brings the child for treatment (Wissow, 1990).

Evaluation and documentation of the burn size and pattern should be precise and include careful drawings. Burn size should be expressed as a percentage of total body surface. Charts which correct body proportions by age are helpful in reliable determination of burn size. Photographic documentation is also recommended. There are no specific laboratory tests that can distinguish deliberate from accidental burns (Purdue & Hunt, 1992).

Positive outcome in burn cases is especially dependent upon followup care. Healing is prolonged and very active outpatient therapy is required for a period of six to eight times the length of hospitalization. After this, evaluations are needed at least yearly until growth stops. Since abusive parents are often non-compliant with treatment, a burned child can be severely compromised if returned to the abusive household. Adequate supports need to be in place if the abused burn victim is returned home.

Skin and Soft Tissue Injury

The skin is the most common site for physical abuse. Skin lesions are evident to nonhealth professionals who may miss signs of internal injury. There only four causes for skin bleeding. These are trauma (accidental or inflicted), coagulation protein disorders, platelet disorders and vasculitis (Kornberg, 1992). It is important, however, to note that the presence of a disorder such as a bleeding disorder does not necessarily rule out child abuse. A study of 50 children suspected of abuse found eight (16 percent) to have bleeding disorders. Seven of the 8 were ultimately proven to be cases of child abuse (Kornberg, 1992).

A standard clotting screen will detect platelet and coagulation disorders. Vasculitis can be excluded through skin biopsy, but this is rarely necessary as it can also be diagnosed by related findings available by inspection. Therefore, the major diagnostic problem is separating accidental from inflicted injuries.

Several factors usually separate accidental from inflicted bruises. First, aging of bruises is important. Bruises change in color and presentation as they heal. Many bruises in different stages of healing suggest repeated battering. Location is also important. Accidental bruises often include shins, knees, elbows and hands as well as forehead, nose and facial bruises. Bruises on the backs, buttocks, stomach, backs of legs and forearms are suggestive in inflicted injury. (Rice et al., 1993).

Patterned bruising is often a clue to abuse. Bruising in the shape of identifiable objects is typically abuse. Common findings are loop marks (caused by electric cord or rope folded over), handprints (slap marks), stick or hair brushes. Sharp borders between normal and damaged skin generally indicates inflicted injury. Restrain marks from cord or rope are one example.

Abuse in other types of physical abuse, the history offered by the caretaker may not match the injury. Delay in seeking treatment is also likely for inflicted injury. The age of the child should also be noted. A toddler might be expected to have bruising whereas an infant who cannot walk is not capable of self-inflicted injury.

The general level of care and presentation of the parents may also be a clue. In a 1982 study in Children's Hospital of Michigan (reported in Commonwealth of Kentucky, no date) an "unkempt" child with signs of "abnormal parenting" had a 30 percent chance of being abused. "Unkempt" referred to conditions such as soiled clothing, dirty or odor. "Abnormal parenting" was defined as one or more of the following: aggressive or hostile behavior towards staff; critical or overly demanding behaviors towards the child, lack of bonding, signs of being under the influence of drugs or alcohol, and signs of euphoria or depression.

Hair loss is another manifestation of child abuse. Several conditions such as nutritional deficiencies and fungal infections (like ring worm) need to be considered also as causes of hair loss. A fairly rare disorder is trichotillomania where the child systematically pulls out patches of his or her own hair.

Some congenital conditions, such as mongoloid spots (discoloration, present from birth, often on the buttocks and lower back) can mimic abuse. There are also cases of hemophilia misdiagnosed as abuse as well as conditions such as connective tissue disorders or photodermatitis which can be mistaken for abuse.

Finally, certain cultural practices such as coin rolling or cupping may present as inflicted injury. Coin rolling is a Vietnamese and Chinese method to treat fever, headache and chills. Oil is applied to the chest and back and massaged until warm. Then the edge of a coin is vigorously rubbed into the skin. Cupping is used to treat pain. A heated cup or glass is placed on the skin. According to Kornberg (1992) such bruising is not abuse as it involves minimal discomfort, no scarring, and is "harmless and well intentioned" (p. 103).

Documentation is extremely important as bruises fade rapidly. If bruising appears to be from a recognizable object, CPS and police need to search the home promptly for the weapon. Photographs are vital. (Photographic guidelines are reviewed elsewhere in the issue.) Radiological studies are indicated in very young children and if there is concern about fractures.

Fractures

It is now estimated that abuse accounts for 20 percent of the skeletal trauma seen in children (Rice et al., 1993). As early as 1946, Dr. John Caffey suggested the connection between unexplained fractures and battered children.

Any fracture can be caused by abuse. Certain patterns of fractures are considered pathognomonic for abuse (Jenny & Hay, 1994). Fractures of the ribs and the metaphyses of long bones are felt to be diagnostic of intentional injury (Wissow,
Abdominal Injuries

Abdominal injuries are second only to head injuries in causing death in child abuse cases. Studies suggest a 40 to 50 percent mortality rate for the 0.5 to 8 percent of physically abused children with abdominal injuries. Such high mortality rates are likely due to delays in seeking treatment and delays in diagnosis caused by inaccurate or misleading information offered by the parents. Also, since children are small, a single blow to the abdomen may injure more than one organ, with greater consequences than a similar blow to an adult (Huyer, 1994).

Serious abdominal injury results from significant force. Most accidental injuries to the abdomen result from falls from great heights or from motor vehicle accidents (generally where the child is a pedestrian). Indirect abdominal trauma results from direct blows, such as a punch or a kick, or from an indirect shearing force generated from rapid deceleration of the body, as when a child is thrown across a room and hits a wall. Stomach and intestines rupture, spilling their contents into the abdominal cavity (Huyer, 1994; Rice et al., 1993).

Accidents most frequently injure the kidney, spleen and liver. In contrast, spleen injuries are rare in inflicted trauma, while the liver is frequently injured and the kidney is the second most commonly injured organ. Gastric rupture, intestinal perforations and intramural hematoma of the intestine are common.

The child will present with vomiting, dehydration, abdominal pain and tenderness. The abdomen will be distended or swollen and muscles of the abdominal wall will be tense. The child may show labored breathing. There may or may not be external injury, bruising or abnormality. Delays of symptom onset can be from one hour to over two days. In cases of serious liver injury, the child will be in shock with internal bleeding, abdominal distention and decreased or absent bowel sounds. Minor liver injuries may remain asymptomatic (Huyer, 1994; Wissow, 1990).

Wissow (1990) suggests that abdominal trauma may be a marker for extremely disturbed families in the late stages of abuse. He cites a study of children from two urban hospitals where over half of those with abdominal injuries were already known to CPS as founded cases.

Poisoning

Accidental poisoning of children is common. More than 400,000 poisoning accidents involving children occur annually in the United States (Bays, 1994). Yet
Inquiry should be made concerning adults in the family with a history of mental illness, with a history of abuse as children, drug or alcohol abuse and frequent or chronic health problems. Marital discord has been cited as a causative agent in child poisonings. If a parent attacks a child, especially a child favored by the other parent, the child’s illness may be perceived to “restore balance” in the household (Bays, 1994).

Care should be taken to try to identify prior incidents of poisonings. One study (Litovitz, et al., 1989, cited in Bays, 1994) reported that 41 percent of children between ages 3 and 5 who had been accidentally poisoned were “repeaters”. Of the 585 “repeaters”, 18 percent had had two prior ingestions, and over 4 percent had had three. One child had 9 prior ingestions, one had 12 and one had 15. Twelve percent of the “repeaters” were younger than one year.

“Repeaters” apparently occur in families with increased stress, poor emotional support, low coping abilities and higher levels of adult physical and mental illness. Even if the child poisons himself, the family creates the conditions for the poisoning to happen. Similarly, neglect at least should be considered if a sibling is blamed for the poisoning.

A number of children who are poisoned have been prior victims of physical abuse, with studies suggesting that about 20 percent show evidence of physical abuse. A history of traumatic injury was reported in 40 percent of 147 children presenting with presumed accidental poisonings (reported in Bays, 1994). There may be a strong association between accidental poisoning and more classic forms of child abuse.

Drugs sometimes may be administered in an attempt to cover up physical or sexual abuse. Children may be given drugs to make them more pliable to sexual overtures. Drugs may be administered in an attempt to control a child’s pain from physical abuse.

Toxicology screens are the major tool for detecting poisonings. Unfortunately, routine toxicology screens are limited. Some common poisons are not detected unless specifically requested. The time elapsed since ingestion also affects results (Bays, 1994).

Commonly used poisons include putting soap, liquid detergent, black or red pepper, or other noxious substances in the mouth. One researcher alone has described 8 children who died after aspiration of pepper (cited in Bays, 1994). A thorough history is important. Many children punished in this manner have had prior instances of abuse. Examination of the pepper container is also suggested.

Use of hot peppers is also abusive and can cause mucosal injury to the eyes, respiratory and gastrointestinal tracts and death. Physicians should ask children about whether they have had anything put into their mouths or if they have been made to eat anything as punishment.

Salt poisoning is not as common, but 17 cases (6 of whom died) have been reported in the literature (Bays, 1994). These children present with vomiting, lethargy, dehydration, hypothermia and seizures. Some salt poisoning is accompanied by water deprivation or restriction. Conversely, water can be forcibly administered as punishment. These children present with apnea, seizures and hypothermia. Some clinicians suspect that many cases of psychosocial dwarfism with bizarre eating and/or drinking behaviors are directly related to abuse involving food or water (Bays, 1994).

Bays (1994) notes several non-abusive causes of water intoxication. One growing problem is when parents do not have sufficient formula and offer water to the infant instead. The daily allotment of formula provided by the Supplemental Food Program for Women, Infants and Children (WIC) is indeed supplemental and will not provide adequate calories for infants over 4 months of age. If a family does not or can not buy additional formula and offers water instead, water intoxication can result.

Ingestion of insulin or oral hypoglycemic agents will produce lethargy, coma and unexplained hypoglycemia. Intentional caffeine poisoning leading to death has been reported, although this appears rare. Ingestion of large numbers of caffeine diet pills, diuretic tablets or “amphetamine look-alike” caffeine capsules can poison children and lead to death. Prescription drugs are frequent...
choices for nonaccidental poisoning, including barbiturates, phenothiazine, antidepressants, diuretics and anti-epileptic drugs. However, any drug may be used.

Lye, household cleaners and other industrial compounds can be administered intentionally for punishment. Caustic ingestions may be overlooked by professionals as a potential form of abuse.

Alcohol and illicit drugs damage many children and claim some lives each year. Some are administered or offered by the caretakers. In other cases, addicted caretakers have the substances where children can ingest them. A few children receive harmful doses of drugs via breast feeding. Passive inhalation can be damaging, especially in cases of POF or free-base cocaine. There are reports of infants and children’s bodies being used to “hide” drugs, for example placing plastic wrapped drugs in the rectum.

Drugs may be given to children to sedate them or to amuse their caretakers. A survey of middle class adolescent girls enrolled in drug treatment revealed that 11 percent had deliberately intoxicated children while babysitting. No parents had discovered the abuse despite some children being exposed as many as 15 times (reported in Bays, 1994).

Symptoms can be varied, depending on the drug(s) and dosage, and upon the age, weight and condition of the child. Symptoms include cardiac arrest, lethargy, unresponsiveness, seizures, respiratory distress, neurological abnormalities and intracranial hemorrhage.

Another source of poisoning, intentional or non-intentional, are herbal remedies and vitamins. Accidental poisonings can occur from contaminated well water, deadly home-canned foods and ingestion of household or outdoor plants. Labeling and dispensing errors are another differential diagnosis as well as errors in medication administration by caregivers.

If a child is found, on one occasion, to be a victim of intentional poisoning, it is likely that previous episodes of poisoning have occurred and/or that future episodes will occur if the child is left unprotected with the caretaker. Child abuse by intentional poisoning appears resistant to psychotherapeutic intervention and may reflect more pathology than some other forms of child abuse. A careful history should be taken, not only of the child, but of siblings, parents and caretakers. Complete medical records should be obtained. A psychological evaluation of the alleged perpetrator is warranted (Bays, 1994).

Four common motivations for poisoning have been suggested. One is impulsive acts under stress such as trying to quiet a fussy baby. The second is neglect or lack of supervision. A third is bizarre or over-controlling child rearing practices. The last is Munchausen syndrome by proxy.

Munchausen Syndrome by Proxy

One occasionally reads about or encounters a case of Munchausen syndrome by proxy (MSBP). This rare and rather bizarre syndrome involves a parent or caretaker who fakes or creates an illness or medical problem in a child in order to be able to repeatedly take the child to a doctor. The caretaker, presumably, enjoys the attention and solace she receives from having a child with puzzling symptoms.

More than 250 cases of MSBP have been reported worldwide from at least 15 different countries (Rosenberg, 1994). However, most cases are likely to go unreported in the literature, as few clinicians write and publish.

Techniques for inducing symptoms are varied. Children may be injected with drugs or other substances. Some are suffocated, then revived. Poisoning is common, as is contamination of IV lines. In 95 percent of cases, victimization continues while the child is hospitalized (Rosenberg, 1994). Some children are coached to adapt symptoms and older children may, through dissociation or shared delusion, accept the faked symptoms as reality (Welliver, 1992).

Another strategy is to describe non-existent symptoms (simulation). For example, the caretaker may describe a seizure when, in fact, the child never experienced a seizure. A third strategy is to withhold treatment (intentionally) in order to exacerbate the child’s condition. Thus, genuine illness and MSBP can co-exist.

It is thought that about a quarter of cases involve simulation, a quarter involve symptom production and half involve both (Rosenberg, 1994). Fatalities can occur when the perpetrator accidentally “goes too far”. As many as a third of these children die, with those experiencing suffocation or poisoning most at risk. Siblings of MSBP children also die “in alarming numbers” (Rosenberg, 1994, p. 268).

Mothers are the most frequent perpetrators, although fathers, relatives, Continued on page 14

Never Shake A Baby - Update

In 1988, the Prince William County Community Services Board launched a public education campaign. VCPN, volume 32, reported on the effort and its goals.

Shaking an infant or preschooler can cause a range of problems including cranial bleeding, retinal damage, partial or total blindness, gastrointestinal problems, brain damage, mental retardation, seizures and death. Shaken infant syndrome is one of the single largest reasons for abuse-related deaths of children. Infants and small children are extremely vulnerable to head trauma if they are shaken. Several factors combine to cause the risk. These are: a heavy head, weak neck muscles, a soft and rapidly growing brain, a thin skull wall, and lack of head and neck control (Showers, 1992).

As early as 1972, Dr. John Coffey, who first described shaken baby syndrome, recommended a massive public education program on the dangers of shaking infants (Showers, 1992). At least five studies since 1985 have revealed that between 26 to 50 percent of adolescents and adults do not know that shaking children can endanger them (cited in Showers, 1992).

A recent study (Starling, Holden & Jenny, 1995) reports on 151 cases of shaken babies. While women traditionally provide most of the care of infants, males cause the majority of abusive head injuries. Mothers accounted for 13 percent of cases and female babysitters were implicated in 17 percent. The results suggest that males need to be targeted in education efforts.

To meet the need for public education, Prince William County Community Services Board has developed a "Shaken Infant Campaign". Linda D. Certa, M.Ed., Mental Retardation Prevention Specialist, directs the campaign. "The project offers flyers, posters and bookmarks in both English and Spanish," says Certa. "There also is a 10 minute video narrated by Joseph Pugliesi, M.D. and citizen information kits." Requests for materials and trainings have come from every state.

To obtain a price list and further information, contact Linda Certa at Prince William County CSB, Prevention Services Division, 8033 Ashton Ave., Suite 107, Manassas, VA 22110, (703) 792-7739.
For many abused children, the point of entry for intervention is the hospital emergency room. What happens here can be crucial for the abused or neglected child. Not only must the hospital provide emergency medical services but staff must also be prepared to suspect the diagnosis of abuse, evaluate the child, report to CPS, develop a medical treatment plan and make referrals as part of discharge planning. In addition, staff must document for CPS and legal officials in a manner that is acceptable to courts and must be prepared to testify if the case is brought to court. In an era of decreasing resources, hospitals struggle to provide this range of specialized services to the community (Sullivan, 1992).

What Should Hospitals Provide?

According to Carolyn Levitt, M.D. (Sullivan, 1992), hospitals should respond to the problem of child maltreatment by providing:

a team approach
consistent 24-hour care
communications with investigating agencies
medical management of the child
standardized response
safe disposition

Each of these components is discussed below.

Team Approach

Medical staff need to work as a team. A triage approach is suggested. There should be a physician who specializes in child abuse available. An R.N. is needed to be a case manager. This person can, with the help of the hospital social worker, interview the family, make collateral contacts, and do the necessary documentation.

Meg Stouffer, M.A., Child/Adult Protection Co-ordinator for University of Virginia Hospital, describes the UVA team. "Our team consists of the directors of child protective services, the nurse administrator, social workers, physicians, and myself," explains Stouffer. "We meet twice a month to review difficult cases and meet on an 'ad hoc' basis for emergencies."

Stouffer says the team does not review every case, as UVA averages one suspected child abuse case per day. Rather, the team concentrates on more complex cases or cases where there is not agreement.

Physicians and other medical staff play a critical role in the collection, preservation and presentation of evidence in child abuse cases. Physicians are the primary medical provider involved in the assessment of child abuse cases. Indeed, a physician's expertise in distinguishing abuse from accidental trauma enables him or her to diagnose and report suspected cases. A physician can protect the child during the investigation through admission to the hospital or by assisting CPS in taking temporary custody of the child. The physician can provide expert testimony, history and physical evidence to the court. Finally, medical staff can provide or arrange for treatment and continuing medical and psychological care (Rice et al., 1993).

Consistent 24-hour Care

Intake access must be 24 hours a day, 7 days a week. Suspected child abuse cases should be a priority.

Communication with Investigating Agencies

In Virginia, as in many states, communication between parent/caretaker/patient and physician is not privileged in cases where child abuse and neglect is suspected. Privilege does not apply either in criminal cases (Gibson v. Commonwealth, 216 VA 412 (1975)) or in child abuse and neglect proceedings (VA code 63.1 - 248.11). Further, statements made by a child to an examining physician may be admissible through the testimony of a physician as an exception to the hearsay rule (Rice et al, 1993). Hospital records and reproductions of records are admissible in court proceedings.

Virginia's code requires reporting of suspected cases of abuse and neglect within 72 hours. Mandated reporters in the medical field include any person licensed to practice medicine or any of the healing arts, hospital residents or interns, persons in the nursing profession, accredited Christian Science practitioners and professional staff persons employed by a public or private hospital or facility in which children are placed. Additionally, a physician who diagnoses a venereal disease in a child 12 years of age or under is required to report this fact to CPS, unless the physician believes the disease to be congenital or contracted other than by sexual abuse.

Reports should be made immediately to the local department of social services in the county where the child resides or to the locality where the abuse or neglect is believed to have occurred. If neither of these is known, the report is made to the local department of social services serving the area in which the hospital discovering the abuse is located.

The initial report may be oral. It must contain all the information which forms the basis for suspicion of abuse or neglect. Upon request, any medical records which document the complaint must be made available to CPS.

Medical Management

Medical management for specific types of abuse and neglect are reviewed in the article on medical management in this issue.

Standardized Approach

A standardized approach is facilitated by the use of a protocol. The protocol that was developed by the child protection team at MCV/VCU for Virginia hospitals is reviewed in this issue, as are other hospital protocols.

Safe Disposition

The Virginia code provides that physicians, as well as law enforcement and CPS, can take immediate custody of a child without parental permission, if failure to remove a child from the parent presents an imminent danger to the child's life or health. Medical staff also are specifically granted the authority to talk to a child or siblings outside the presence of parents, guardians and caretakers and
Child Abuse and Neglect

without permission of the child’s guardian (see Code Section 63.1 - 248.10)

Safety for the child and medical treatment are the first priority for the physician. Prompt action, provision of complete information, and accurate, thorough documentation are crucial to provision of safety for the child.

Collaboration between the hospital and the community is a key to assuring child protection (Sullivan, 1992). With the current emphasis on short term hospital stays, discharge planning is crucial. Whether the abused child is discharged to her family or to foster care, it is imperative that followup medical and psychological care be provided and that the child’s safety be assured.

Medical followup is frequently a “weak link”. Parents or caretakers sometimes do not return for appointments. Medical treatment should be part of the ongoing intervention plan. Carole Jenny, M.D., of Denver’s Children’s Hospital, notes that payment for medical care is also an issue. Some insurance companies have disclaimers and do not pay for care required for inflicted injuries. Also, tests and documentation for investigative or court purposes is not covered, nor does insurance reimburse for time required for court testimony by doctors or other medical staff. About 40 percent of abused children seen at Jenny’s facility are not covered by any health plan.

The Medical History and Examination

Since circumstances vary, there is not a uniform approach to evaluating suspected abuse cases. Sometimes, the health care provider is asked to evaluate a child who is already reported as a suspected abuse case. Sometimes a caretaker suspects abuse and asks for a medical evaluation. Other times, a physician becomes suspicious while examining a child for an unrelated complaint or an injury said to be an accident.

Wissow (1990) offers some guidelines applicable to all cases. He stresses first that the most important task is to assess the child’s need for immediate medical and psychological care. During the evaluation, the physician must maintain both an appropriate level of suspicion and a neutral, objective attitude. The physician should avoid both jumping to conclusions or rationalizing an incomplete examination.

There are three main steps to a complete evaluation of a suspected abuse case: 1) the initial medical history and social assessment, 2) the physical examination and testing, and 3) the investigative interviews of the child and family.

In actual abuse cases, the initial medical evaluation is confounded by the parent offering a medical history that is misleading or false. While an improbable story may be a clue to abuse, it does not help in diagnosing the child’s immediate medical problems. Reliance upon a misleading history can result in dangerous delays in difficult diagnostic cases such as abdominal trauma. The lack of accurate clinical history can also be crucial in cases of abusive head injury. According to one source (Smith, 1994) over 95 percent of initial histories supplied by caretakers of abused children were false. Even in cases where a correct history was given, the extent of the trauma was minimized.

It is important for the medical staff to record any history offered by the parent or caretakers. Professionals involved later in the case will need to check to determine if the explanation offered has changed. The physician should ask for details and document whether the informant was a witness or obtained the information second-hand. Repeating the information back to the informant is one way to verify that the record is accurately reflecting what was said. The child should be questioned separately from the parents, if at all possible.

Social background can be obtained by the physician, a nurse, an assistant, or the hospital social worker, psychiatrist, psychologist or other mental health professional. Obtaining some social data early may help determine if a more detailed history is needed. At minimum, Wissow suggests obtaining the parents’ ages, occupations and extent of contact with the child. A history of major illnesses and medications in the home is needed. The interviewer should inquire about any current stresses such as financial difficulties, a recent move or the loss of someone close to the family. Also, it should be determined if anyone in the family has a substance abuse problem and whether or not domestic conflict has been present.

Information specific to the child is also necessary. Who is the primary caretaker and who else sometimes assumes caretaking responsibility? Who else lives in the home and what is their relationship to the child patient? Are siblings living outside the home? What is the health status of siblings and have any died? Where does the child generally go for health care? Are immunizations up-to-date? When was the child last seen for medical treatment?

Health professionals should note, in particular, any history of trauma, prior hospitalizations and presence of difficult-to-diagnose problems. Parent questionnaires or checklists may be an efficient way to obtain history, but little research is available to suggest how mailtreatment parents respond to these tools.

The second aspect of the evaluation is the physical examination. The examination should be therapeutic as well as diagnostic. It should also be complete, because if the history is misleading, there may be surprise findings. The physician should be alert to any sign that there was a delay in seeking treatment. The child’s general condition should also be noted.

Accurate written documentation of findings is crucial. The medical record is both a medical and a legal document. It should be clear, objective, and well organized. Entries need to be dated and signed legibly. Gathering and analysis of specimens should adhere to state protocol and the physician should be prepared to testify as to the ‘chain of custody’ of each specimen collected. All samples or evidentiary items should be signed over to law enforcement as soon as possible.

Photographs should be taken where possible. (In an effort to help standardize

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An Interview with Dr. Anthony Shaw

Dr. Shaw: Although far better than twenty years ago when few physicians had been taught in medical school or residency to recognize child abuse, there still is a disinclination to report. The "backlash" from mistaken diagnosis of abuse takes a toll in discouraging reporting on "reasonable suspicion". There is some sentiment that if mistakes are made in diagnosing abuse, the law compelling reporting is at fault and should be abolished. The problem is not with the laws but with training, education and sufficient funding and staffing.

Q: Is it difficult for doctors to acquire information about child abuse injuries and to update their information?

Dr. Shaw: Very difficult. Not only are old diagnostic concepts being re-evaluated constantly in such areas as sexual abuse, fractures and brain injuries, but controversies continue to rage among scholars in these areas. The validity of criteria such as retinal hemorrhages and spiral fractures to distinguish between inflicted and accidental injury is debated as is the validity of criteria such as anal or vaginal diameter in distinguishing between the pathological and normal.

Q: What recommendations do you have for medical professionals?

Dr. Shaw: Keep up with the "abuse" literature in your field whether you are a family doctor, pediatrician, dermatologist or neurosurgeon. Unfortunately, the most relevant and definitive articles may not be in the journals you read regularly, in which case I recommend that from time to time you check Med-Line. Articles on retinal hemorrhage, an important component of "shaken baby" or "shaken-impact" syndrome, may appear in the ophthalmology, neurosurgical, forensic, trauma, pediatric or child abuse literature. I have even found useful data on injury in materials from the Safety Product Commission.

Referrals to pools of expertise such as the multidisciplinary team we started at UVA, now called SCAN teams in most hospitals, may be essential, especially in complex sexual abuse cases. It makes sense to refer suspected cases to a facility which offers comprehensive evaluation and which can also carry the burden of presenting expert testimony in court.

The medical hotline at MCV is a valuable resource for frontline practitioners. There are now more texts and atlases on the diagnosis of physical and sexual abuse than ever before as well as superb continuing education programs put on regionally and nationally. I continue to receive the Virginia Child Protection Newsletter in California because it is one of the best sources of general information about important aspects of child abuse and neglect in the English language.

Q: What are the most pressing needs for medical staff?

Dr. Shaw: There is a need for better information about both inflicted and accidental injuries. Much of what we receive is anecdotal, dubiously documented or based on unproved assumptions. We need more experimental data, although both animal and mechanical models have limited value in shedding light on mechanisms of human injury. Medical staff need to understand that diagnosis of child abuse is usually a team effort involving not only physicians in various specialties but social workers, psychologists and others. It is crucial to keep an open mind and make sure that authorities are updated on later findings.

Q: How would you summarize the physician's role and responsibilities in detecting child abuse?

Dr. Shaw: The law we helped pass twenty years ago makes it clear that physicians have a primary duty to report suspicion of child abuse. Although other professionals such as teachers and social workers are similarly charged, it is physicians who must try, on the basis of their education, training and experience, to make the often difficult distinction between accidental and inflicted injury, between abusive and congenital lesions, between fractures resulting from abuse or a metabolic disease such as osteogenesis imperfecta, or between bruises from a beating and bruises from leukemia. If the physician fails to recognize abuse, a child may die. If the physician charges abuse where none exists, a family may be badly damaged. In maintaining their diagnostic skills, knowing where and to whom to turn for help, realizing that the responsibility is not theirs alone, physicians on the front lines of the struggle against child abuse are likely to make good choices. However, this being said, if reason to suspect remains, report!

Dr. Shaw can be contacted at: Department of Surgery, Room 2B-156, Olive View-UCLA Medical Center, 14445 Olive View Drive, Sylmar, CA 91342-1495.

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Hospital Management

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practice, the American Professional Society on the Abuse of Children has drafted guidelines for photographic documentation of child abuse, see review, this issue.) A series of photographs is recommended and should include at least one with the face of the victim. Close-up pictures should also have another photo with enough of the rest of the body to establish the site of the close-up.

The third component, investigative interviews of child and family will not be described in detail in this article. Some of the hospital protocols reviewed in this issue provide a specific outline for interviewing. Also, aspects of investigative interviewing have been addressed in prior issues of VCPSN (Volumes 43, 44).

Education

Every nursing, social work and medical student should receive education in dealing with child abuse cases. Stouffer stresses the importance of education for everyone in the health care setting, "even the secretary," Joseph Zanga, M.D., professor of pediatrics at MCV/VCU Children's Medical Center in Richmond, is emphatic about the need for education of "prehospital" providers, as well. "The emergency personnel who respond to a call see the home," states Dr. Zanga. "It is important that they evaluate the scene of the injury. What surface did the child fall on? How far was the fall? What is the general organization of this home? For burns, the EMTs can get a tap temperature of the water. This helps doctors make decisions about how serious the burn is and also can be used as evidence in court."

Dr. Zanga notes that current EMT training contains "bits and pieces about diagnosing child abuse." However a comprehensive training curriculum is needed. Physicians often receive little education in medical school that is specific to child abuse and neglect. "The training for doctors is inadequate," states Dr. Jenny. "At many universities there is only cursory information given and the rotation may even be elective. Out of a four year curriculum, only an average of 1.5 hours is offered concerning child abuse." Dr. Jenny explains that medical schools traditionally have done a better job of teaching scientific and technical information than with teaching about psychosocial problems. There are a few fellowship programs to train interested doctors, but the resources for medical training in child abuse issues are very limited.

In some states, such as New York, all mandated reporters take a two hour approved child abuse and neglect course in order to be relicensed. However, it is recognized that some individuals have a difficult time with this type of education and may not be suitable to work with cases of suspected abuse. Those who are afraid of the families, those who overidentify because of their own past history of abuse and those who simply are not interested in the work should delegate suspected abuse and neglect cases to others (Sullivan, 1992).

Continuity of education is also an issue. Medical staff must continually update skills. This can be accomplished through continuing medical education workshops, membership in APSAC, (American Professional Society on the Abuse of Children), subscription to access information through computer services, or purchase of updated information (especially through American Academy of Pediatrics). Several recent comprehensive medical reference books are reviewed in this issue.

Summary

Dr. Zanga stresses that hospitals will retain a major role in diagnosis and management of severe or complex cases of child abuse, child neglect or child sexual abuse. "Any hospital which provides significant pediatric care should be providing the core services for diagnosis and management of child abuse," states Dr. Zanga. "These services" he continues, "include case consultation, advice, comprehensive evaluation, treatment and referral as well as provision of feedback and data to the department of social services and police."

References Provided Upon Request

Resources from Virginia Department of Social Services


Assistance for Medical Professionals in the Diagnosis and Management of Suspected Child Abuse and Neglect, 1995, free of charge prior to Sept. 1, 1995, $1.65 after Sept. 1.

This booklet contains information about Virginia child abuse laws, medical and behavioral indicators, medical evaluation plans and the role of child protective services. It is designed as a reference and training tool.

Never Ever, Ever Shake Your Baby!

Posters and pamphlets aimed at preventing Shaken Baby Syndrome are available at no cost. The pamphlet provides information about the reasons infants cry, how to manage a crying baby, and available resources.


This report provides statistics for the 36,460 reports of suspected child abuse received during fiscal year 1993. Of these, 9,700 reports were substantiated. Child deaths due to abuse and neglect rose to 43, eleven more than in FY 92. The report offers statistics for each region as well as for counties and cities. Data about ages of the child victims and their relationships to the caregivers who abused them is included. The report also contains information about some of Virginia's prevention projects and initiatives, recipients of state grants and prevention month activities.
Resource Reviews

Available from: NCCAN Clearinghouse, P. O. Box 1182, Washington, DC 20013-
1182, 703-385-7565 or 800-FYI-3366, FAX 703-385-3206.

Hospital-Based Responses to Child Abuse and Neglect, by Francis X.
Sullivan, 1992, $10, 34 pages plus 58 pages of appendix material, Pub. #20-
10062, $10.00.

This document is a report on a symposium organized by the National Center on
Child Abuse and Neglect. The symposium considered the complex range of issues
faced by hospitals as staff grapple with the identification, treatment and referral of
cases. Issues concerning training, provision of inpatient care, reporting, relationships
with guardians and use of teams are discussed. Several appendices offer protocols
and useful material.

Annotated Bibliography


The Visual Diagnosis of Child Physical Abuse, prepared by Carole Jenny, M.D.
and Thomas C. Hay, D.O., 1994, 150 slides and 33 page study guide, #M40065,
$149.95

Available from: AAP, P.O. Box 927, 141
Northwest Point Blvd., Elk Grove Village,
IL 60009-0927, (800) 433-9016, FAX (708)
228-1281.

This audiovisual teaching aid is directed toward improving health practitioners' ability
to identify physically abused children. Aspects of the medical evaluation are covered
briefly. The slide program shows injuries from abused and non-abused children.
Major emphasis is on burns, radiological diagnosis, fractures, head trauma, ocular
findings, abdominal injuries, and injuries to the face, ears, mouth and neck. This
series is an excellent training program specific to medical staff.

Curriculum Child Abuse

Child Abuse, by Holly Rice, John Pisapia and
Miriam E. Bar-on, M.D., 1993, 129 pages,
$25.00.

Available from: Children's Medical Center
Child Protection Team, Medical College of
Virginia, Virginia Commonwealth
Division of General Pediatrics and Emergency
Care, Box 980514, Richmond, VA 23298.

This curriculum on child abuse and neglect
is designed for health care workers and hospi-
tal staff. It details the diagnosis of child
abuse and how to differentiate accidental
from inflicted injuries. Medical personnel are
guided in how to diagnose and report sus-
ppected cases. A section also discusses the
physician's role as an expert witness. Every
medical facility in Virginia should obtain a
copy of this excellent resource.

"A Medical View, written by Astrid Heger,
M.D., F.A.A.P., 1985, 30 minutes, $199.95.

Available from: NIMCO, 102 Highway, 81
North, P.O. Box 9, Calhoun, KY 42327-0009,
1-800-962-5662, 502-273-5000.

Child sexual abuse is the most critical issue
in pediatrics today." However, according to the
video, many physicians are untrained in dealing
with sexual abuse victims. This video teaches physicians how to gather needed medical
data through a sensitive, thorough exam.

Detailed instruction in evaluating medical data is offered. There is a 50 page guide that
accompanies the video. It includes sample pro-
tocols for preserving medical evidence, colposcopc photographs of normal and traumatized
genitalia, evidence-collection checklists, and
a step-by-step guide to the medical exam. The
guide can be ordered separately for group
instruction at a cost of $12 to $9 depending
on quantity.

A Guide to References and Resources in
Child Abuse and Neglect, by the Section of
Child Abuse and Neglect, American Academy of
Pediatrics, 1994, 197 pages, #M40061,
$29.95 plus shipping and handling.

Available from: AAP, P.O. Box 927, 141
Northwest Point Blvd., Elk Grove Village,
IL 60009-0927, (800) 433-9016, FAX (708)
228-1281.

This guide contains an annotated bibliography
on each of 21 types of child abuse likely to be
seen by medical practitioners. Nine policy
statements (reviewed elsewhere in this issue)
are included. State and regional contacts are
listed for child death review teams, AAP
Chapter Committees, major child welfare asso-
ciations, state NCPCA chapters and medical
diagnostic programs. This is an excellent
resource for those seeking current contact
and literature.

Child Abuse: Medical Diagnosis and
Management, by Robert M. Reece, M.D.,
1994, 468 pages, $72.

Available from: Williams and Wilkins,
Customer Service, P. O. Box 1496, Baltimore,
MD 21208-9724, (215) 215-2230 or (800)
636-0672, FAX (800) 447-8438.

Recently, medical specialists have begun to
utilize new and sophisticated diagnostic tech-
niques to study medical issues of inflicted injury
and sexual abuse cases. The accumulation of
understanding has appeared in a very diverse
range of journals, requiring exceptional vigil-
ance for the medical professional to stay
informed about recent findings.

Reece's book presents an integrated resource for the practitioner. An impressive
array of contributors have combined efforts to produce a superior compilation of the latest
information. Specialists in radiology, oph-
thalmology and pediatrics examine head trauma and skeletal manifestations of child abuse. An
ophthalmologist explains ocular findings. Pediatric
dentists show dental, neck and facial lesions
commmon to abuse. Dr. Reece details how to
discriminate fatal child abuse from sudden
infect death syndrome (SIDS). Other very in-
fomative and detailed chapters explain poison-
ing, thoracic and abdominal injuries, neglect,
failure to thrive and Munchausen Syndrome by
Proxy. A chapter summarizing medical findings in
child sexual abuse provides recent studies by
adolescent gynecologists, including the latest
information about sexually transmitted diseases.

Particularly valuable are chapters detailing
conditions that can be mistaken for child abuse
or child sexual abuse. Genitico disorders that
can mimic child abuse. SIDS are also dis-
cussed. Instructions for how to document find-
ings through photography are included.

The focus of this volume is totally upon the
medical diagnosis and management. It is eas-
ily the most detailed, thorough, well-written re-
ference volume that VCPN staff encountered.

Current Trends in Child Abuse Reporting
and Fatalities: The Results of the 1994
Annual Fifty State Survey, by David Wiese
and Deborah Daro, April, 1995, 21 pages, $2
suggested donation.

Available from: National Committee to Prevent
Child Abuse (NCPOA), 332 S. Michigan Ave.,
Suite 1600, Chicago, IL 60604, (312) 663-
3520 TDD, (312) 663-3540. For a free cata-
logue of other NCPOA publications, contact
NCPOA Fulfillment Center (800) 835-2671.
Guidelines and Protocols

HOSPITAL PROTOCOL

For the Treatment of Sexual Assault Victims

Virginia's Hospital Protocol for the Treatment of Sexual Assault Victims by the Hospital Protocol Development Task Force, 1990, 90 pages, free of charge.
Available from: Department of Criminal Justice Services, Victim Services Section, 805 East Broad Street, Richmond, VA 23219 (804) 786-4000.

This protocol reflects expertise of representatives from the Virginia Hospital Association, the Virginia State Crime Commission, the Department of Criminal Justice Services and the Department of General Services Division of Forensic Science. Both adult victim and child victim protocols are included.
The child protocol gives a definition of abuse and general information about child sexual abuse. Details on reporting suspected abuse are included. Consent issues are covered. The process of intake and child interviews is outlined. A step-by-step process for the medical evaluation and evidence collection describes specific procedures that are recommended.
Post-examination procedures and the law enforcement interviews are described. An appendix discusses sexually transmitted diseases and contains sample forms.

American Professional Society on the Abuse of Children

Guidelines for Photographic Documentation of Child Abuse

The 1994 guidelines detail uses of photographs and suggestions about equipment (camera and lens), lighting and film. The guidelines discuss how to talk to the child about the photographing. Legal considerations such as preserving the chain of evidence and verifications are covered.

Descriptive Terminology in Child Sexual Abuse Medical Evaluation

These guidelines standardize terminology used in medical evaluations.
Available from APSAC, 407 S. Dearborn St., Suite 1300, Chicago, IL 60605

Available from: New York State Department of Social Services, Division of Family and Children's Services, 40 North Pearl Street, 11th Floor, Section D, Albany, NY 12243-0001.

These guidelines cover definitions, reporting, recognition, assessment and documentation of abuse and neglect. Appendices contain New York State laws relating to child abuse, an administrator's checklist for suspected child maltreatment, a physician's checklist, listings of New York State Child Protective Service Agencies, the State Central Register of Child Abuse, and maltreatment report forms.

SEXUAL ASSAULT/ABUSE: A HOSPITAL/COMMUNITY PROTOCOL FOR FORENSIC AND MEDICAL EXAMINATION BY FREDERIC J. COWEN, ATTORNEY GENERAL, AND COMMITTEE, 1989, 60 PAGES PLUS 56 PAGES OF APPENDICES.
Available from: Carol C. Wilson, Cabinet for Human Resources, Department of Social Services, Commonwealth of Kentucky, 275 East Main St., Frankfort, KY 40621, (502) 564-3867.

Protocols for both adult sexual assault victims and child victims of sexual abuse are included. Appendices contain forms, evidence collection kit, instructions for testimony, a summary of medical evidence suggesting child abuse or neglect, Kentucky resources and Kentucky statutes.

OTHER USEFUL RESOURCES


Medical Management

Continued from page 7

babysitters or nurses may occasionally be the perpetrator (Welliver, 1992). Most child victims are infants or toddlers and if a younger child is born, the older one's symptoms may "fade away" as he or she is ignored in favor of the preverbal, more easily manipulated, baby.

MSBP perpetrators present at first as affable. However, broader experience reveals a hostile, difficult and demanding personality. Some appear to have a dissociative disorder. Most have a background of childhood maltreatment. Many fit no diagnostic category but some may be diagnosed as depressed or personality disordered (borderline, hysterical, narcissistic). Psychois is rare.

Even if parents are married, the father is noticeably absent due to employment or marital discord. The perpetrator is likely to have some medical background. The parent perpetrator may appear to be devoted to the child. The child is hospitalized, the perpetrator remains constantly by the bedside, assuming nursing responsibilities. The parent may seem strangely unconcerned by the seriousness of the child's condition (Welliver, 1992).

Diagnosis of MSBP is difficult and often involves some risk to the child. Videotaping while the child is hospitalized has successfully recorded some incidents of abuse. Other cases are noticed when the child improves after separation from the caretaker but shows exacerbated or new symptoms when returned home. Once MSBP is suspected, diagnosis is usually made quickly. However delay in diagnosis is common, ranging from 15 months to 20 years in reported cases. Although pediatricians critically evaluate history, medical services are not designed to detect a history that is "simply one large bundle of staged lies" (Rosenberg, 1994, p. 267).

Regrettably, cases of MSBP may be first identified by a child fatality review team. If more than one child in a family dies of sudden infant death syndrome or any ill-defined illnesses, MSBP, along with other genetic, metabolic, environmental and toxicologic causes of death must be considered as explanations.

Warning signs of MSBP include unexplained illnesses, prolonged over months or years, especially if experienced physicians find the case unusual. Symptoms and signs that are incompatible is a sec-

ond clue, as are laboratory findings that are normal despite the child's continued illness. Alternatively, laboratory findings may vary from grossly abnormal to normal from day to day due to parental tampering with the specimen. Prior ineffective therapy is suspect, as is a family history of unexplained, serious but vague illness. Physicians should keep in mind that the child may have or have had a genuine illness that is distorted or manipulated (Welliver, 1992). Perpetrators only rarely admit to MSBP. Often, the perpetrator will be very willing to engage in voluntary intervention, but no success has been reported with voluntary services. Court-ordered intervention appears to be necessary (Rosenberg, 1994). Out-of-home placement, both for the known victims and for siblings is generally recommended. Obviously, the health status of the child needs to be monitored very closely while in foster care.

A particularly difficult problem is future pregnancies and risk to these subsequent children. There is no formal method to track the perpetrator if children are permanently removed, however, every reasonable effort needs to be made to protect future children. The perpetrator's impetus to attack a child is likely deep-seated and profoundly pathological. Mere passage of time is unlikely to lower risk.

Sexual Abuse

Medical evaluation for suspected sexual abuse is a relatively recent phenomenon. Only in the last decade have studies and commentary begun to appear addressing the question of physical findings in sexually abused children.

Medical practitioners have a role in detecting child sexual abuse. Prior to the child's disclosure or to caretakers suspicion, the medical doctor may suspect sexual abuse in the course of examining the child for some other complaint. Typical "masked presentations" included early pregnancy, depression, suicidal thinking and psychosomatic complaints (Hunter et al., 1985). Also, presence of some sexually transmitted diseases (STD's) is considered reason to suspect (Hunter et al., 1985; Neinstein et al., 1984).

A medical doctor may also be asked to evaluate a child suspected of being a victim of sexual abuse. This request may be from a parent, from law enforcement or from CPS. In these cases in particular, it is important for everyone to be aware that a medical evaluation for physical evidence of sexual abuse is only one aspect of the overall assessment. Many, if not most, physical exams will yield normal findings, even if sexual abuse is proven (Adams, 1992; Bays and Chadwick, 1993; Berkowitz, 1992; Meltzer & Kurchuk, 1991). Thus, medical diagnosis is based upon a combination of history, physical findings, and where appropriate, laboratory tests (Bays & Chadwick, 1993).

A normal physical exam is expected because many types of sexual abuse such as fondling or oral sodomy leave no physical signs. Also, delay in treatment is a factor. It is known through followup studies that sexually abused children who have experienced penetration recently may show physical signs. However, within 24 hours to one month signs of sexual assault may be gone. Further, onset of puberty can obscure evidence of injury. For example, even if an exam is timely, only about half the cases of acute anal penetration will have visible findings (Berkowitz, 1991). Overall, findings diagnostic of sexual abuse are found in only 3 to 16 percent of child victims (Bays & Chadwick, 1993).

It is important that both professionals and families realize that a normal physical exam does not "rule out" sexual abuse. Otherwise, the physical will only contribute to a family's denial of problems (Vandeven, 1992).

While some disagreement exists in the literature, certain findings are accepted by most clinicians as diagnostic of sexual abuse, even in the absence of a complaint from the child or history from a caretaker. These findings are presence of semen, sperm, or acid phosphatase; pregnancy; fresh genital or anal injuries including lacerations, abrasions, contusions, transection, avulsions, hematomas, ecchymoses, petechiae and bite marks in the absence of an adequate explanation; positive test or culture for syphilis or gonorrhea that is not acquired perinatally or through intrauterine route; a markedly enlarged hymenal open for age with associated findings of hymen disruption including absent hymen, hymenal remnants, healed transection or scars (in absence of an adequate accidental or surgical explanation) (Bays & Chadwick, 1993).

Others argue convincingly for concern and labeling with a broader range of findings. Wissow (1990) notes that only a small proportion of sexually abused children are found to be infected with a STD. Krugman (1991) states "Any child with a sexually transmitted disease is a child who has a substantial risk of having been sexually abused" (p.339). He adds that children who have chlamydia, trichomoniais, venereal warts, or herpes type II should be considered "probably sexually abused". Bays and Chadwick (1993) agree that these STDs should trigger an evaluation for sexual abuse. Transmission of STDs outside the perinatal period by non-sexual means is a rare occurrence (Bays & Chadwick, 1993; Neinstein et al., 1984).

At the time abuse is disclosed or suspected, the identity of the abuser, the
nature of his or her medical problems and the type of sexual contact are generally not known. Young males, especially, may have been victims of older men who are at risk of carrying STDs. Also, the growing realization that STD’s can be acquired by a child from sexual contact with other children has served to explain some cases of STDs that might previously have been attributed to nonsexual contact (Wissow, 1990).

There is disagreement about the need to perform laboratory tests for STDs in cases of suspected abuse. Wissow (1990) notes that gonorrhea is fairly common, citing findings of 10 percent in children enrolled in a sexual abuse treatment program. Wissow suggests that cultures for both gonorrheal and chlamydial infections be obtained from the pharynx, anus and genitalia of suspected victims.

The medical examination also checks for genital and anal trauma. A physician must be knowledgeable about normal anatomy and the changes that occur in size and appearance of the genitalia as a child progresses from infancy through puberty. A 1987 study by Ludson et al. surveyed urban pediatricians to determine their knowledge of sexual abuse. Many did not routinely examine the genititals of female children and lacked practice and knowledge necessary to detect abnormalities due to abuse. Thus, it is suggested that primary pediatricians include a genital exam in every physical in order to become familiar with normal anatomy (Berkowitz, 1991). The importance of training, experience and consultation is documented in other studies as well (Bryden et al. 1991; Hibbard & Zollinger, 1992). Numerous guidelines are available to assist the physician (see resource reviews), data now exists on hymenial openings in abused and nonabused girls and some normative data exists on physical findings in nonabused children.

There is a spectrum of findings produced by molestation. Some are specific; other are nonspecific. The types of physical findings vary according to many variables including types of sexual abuse, objects or body parts used, age of the child, amount of force used, use of lubricants, number of episodes of abuse and time elapsed before the exam (Bays & Chadwick, 1993). For particular data, readers are referred to Defong, 1992 (in Ludwig & Kornberg, eds.) and to Wissow, 1990.

There are conditions that may mimic findings of sexual abuse. If genital injuries are present, accidental trauma or conditions that present with bleeding must be ruled out, such as infections, irritation or inflammation due to nonsexual etiology. A variety of dermatologic and congenital conditions may be confused with findings indicative of sexual assault. Anal findings can be due to poor hygiene, pinworms, infection, gastroenteritis and inflammatory bowel disease as well as sexual abuse. It is worth noting, however, that accidents, masturbation and use of tampons are very unlikely to cause injury to the hymen or internal genital structures (Bays & Chadwick, 1993).

If the most recent incident of abuse is within the last 72 hours, forensic specimens need to be collected. Hospital protocols have been developed to aid physicians in performing specimen collection in a manner that meets legal specifications (see reviews, this issue).

The over-riding consideration, however, is to perform the medical examination in a manner that is non-traumatic. The physical exam should determine whether or not the child has diseases or injuries relating to the abuse that warrant medical care. It is important that the child emerge from the exam reassured about his or her physical integrity and well-being (Berkowitz, 1992; McHugh, 1991).

Several of the protocols address the psychological impact of the medical exam. The Commonwealth of Kentucky protocol, in particular, offers age-specific suggestions for creating a non-threatening examination. The medical evaluation for physical evidence is only one aspect of the overall assessment for sexual abuse. Physical findings, when they exist, are strong evidence. The history and statement of the child are equally important, be these gathered by the physician or by other team members (Dubowitz, et al., 1992).

Serious and Fatal Neglect

Neglect is the most prevalent form of child maltreatment. Neglect is almost always a pattern of failure to provide one or more of the essentials for survival: food, fluid, medical care or supervision.

Failure to provide food results in acute starvation if the failure is short-term. The child may not appear malnourished, even if death results. If the nutrition is inadequate, rather than absent, failure to thrive may result. Failure to thrive is a condition in which the child fails to gain the weight or height expected and there is no organic disease to account for the growth failure. The child appears profoundly malnourished and emaciated.

For both acute starvation and failure to thrive, the medical staff should check carefully for other signs of abuse. A skeletal survey, evaluation for sexual assault, and toxicology screens may be indicated (Rosenberg, 1994).

Failure to provide fluids results in dehydration. There are many disease-related causes of dehydration. In cases of child neglect the most common reasons for dehydration are punishment for toileting accidents or other offenses. The child will present with dry eyes, dry mouth, decreased or absent urine output, vascular collapse and blood vessel clots (Rosenberg, 1994).

Parents or caretakers may fail to access medical care for several reasons. These include religious beliefs, fear of abuse being diagnosed, costs of care, underestimation of the severity of the problem, lack of judgement or lack of motivation. When failure to provide care results in death, permanent impairment, or serious consequences for the child, neglect is indicated.

Failure to supervise is a frequent precursor of accidents for children. A caretaker may be inattentive due to

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