Physical Child Abuse of One Pediatric Tertiary Care Center

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Abstract :

***Objective* : To study the demographic characteristic of physical abuse children in one tertiary care center in Thailand.**

***Study design* : Retrospective, descriptive study.**

***Materials and methods* : Demographic data and character of injury/injuries of 23 children with diagnosis of physical abuse treated at Queen Sirikit National Institute of Child Health during the year 1995-1999 were analysed.**

***Results* : There are an increasing number of physically abused children during the years 1997-1999. The average age was 24 months. Two-thirds of the cases were female. Two-thirds were younger than 3 years of age. Two-thirds of children younger than 3 years of age faced with major type of injury. Children from birth to 3 years of age were maximally abused in terms of number and severity. Skin lesions were the most common findings followed by musculoskeletal injury, head injury, abdominal injury and intentional poisoning respectively. One half of the cases were abused by their parents or step-parents. Nearly half of them were still living with the perpetrator.**

***Key words* : Child abuse, physical abuse**

เรื่องย่อ : **ภาวะเด็กถูกกระทำทารุณทางกายของสถานพยาบาลตติยภูมิ**

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สารศิริราช 2546; 55: 234-239.

วัตถุประสงค์ : เพื่อศึกษาลักษณะและข้อมูลพื้นฐานของผู้ป่วยเด็กถูกกระทำทารุณทางกายที่รับไว้รักษาในสถานพยาบาลระดับตติยภูมิแห่งหนึ่ง

รูปแบบการศึกษา : การศึกษาเชิงพรรณนา แบบย้อนหลัง

วิธีการศึกษา : ทำการทบทวนประวัติและภาพรังสีของผู้ป่วยเด็กในสถาบันสุขภาพเด็กแห่งชาติมหาราชินี จำนวน 23 รายที่ได้รับการวินิจฉัยเป็นภาวะถูกกระทำทารุณทางกายระหว่างปี พ.ศ. 2538-2542 รวบรวมข้อมูลทั่วไปของผู้ป่วยและรูปแบบของการบาดเจ็บ

ผลการศึกษา : พบอุบัติการณ์ที่เพิ่มขึ้นในสถาบันสุขภาพเด็กแห่งชาติมหาราชินี ระหว่างปี พ.ศ. 2540-2542 ซึ่งตรงกับช่วงที่ประเทศไทยเกิดวิกฤตเศรษฐกิจ อายุเฉลี่ยของเด็กที่ถูกกระทำทารุณทางกาย 24 เดือน สองในสามมีอายุน้อยกว่า 3 ขวบ เด็กหญิงมีอุบัติการณ์สูงกว่าเด็กชายคิดเป็นอัตราส่วนสองต่อหนึ่ง เด็กเล็กช่วงอายุตั้งแต่แรกเกิดจนถึง 3 ขวบปีแรกเป็นช่วงอายุที่ถูกกระทำมากที่สุด และมีความรุนแรงมากกว่าช่วงอายุอื่น พบการบาดเจ็บทางผิวหนังมากที่สุด ตามด้วยระบบกล้ามเนื้อและกระดูก สมอง และช่องท้องตามลำดับ ครึ่งหนึ่งของผู้ป่วยถูกกระทำโดยพ่อแม่ พ่อเลี้ยงแม่เลี้ยง เกือบครึ่งหนึ่งของผู้ป่วยกลุ่มนี้ยังต้องกลับไปอาศัยอยู่ในสภาพแวดล้อมและผู้เลี้ยงดูคนเดิม

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INTRODUCTION

Physical child abuse is any act that results in a nonaccidental physical injury, such as beating, punching, kicking, biting, burning, and poisoning.[1]

The number of reported cases of child abuse world wide has exploded into a public health epidemic with an incidence that is ten times higher than that of cancer (child abuse rate = 40 per 1,000 population; cancer incidence = 3.9 per 1,000 population).[2] The rate of physical abuse is 24%.[3]

Child abuse has been frequently reported in the media in Thailand. The purpose of this study was to find out the demographic characteristic and the nature of physical abuse children in one tertiary care center in Thailand.

MATERIALS AND METHODS

A retrospective study of the charts and radiographs of all children with diagnosis of child abuse treated at Queen Sirikit National Institute of Child Health (QSNICH) during January 1995 to December 1999 was conducted. There were 30 children with diagnosis of child abuse, of which 23 were physical abuse and 7 were sexual abuse.

Twenty three physically abused cases were indexed to this study. Demographic data, including the diagnosis and associated injuries, the perpetrator and the person or organization who took care of the child after the abuse, were collected. All children were categorized into 3 age groups, i.e. from birth to 3 years of age, 3 years - 7 years and older than 7 years of age. Children who presented without a record of positive physical finding or investigation and those with only soft tissue injury or skin lesions were categorized into minor injury group. Children with a major life threatening injury or deformity producing injury (if untreated); including abdominal injury, head injury, musculoskeletal injury and intentional poisoning, were categorized as major injury group.

RESULTS

There were one cases diagnosed in 1995, two in 1996, six in 1997, five in 1998 and nine in 1999 (Figure 1). The mean age of the fifteen girls (65%) and eight boys (35%) was 24 months, ranging from 24 days to 11 years 7 months. Fifteen children (65%) were younger than 3 years old and half of them (8/15) were younger than 1 year. There were 4

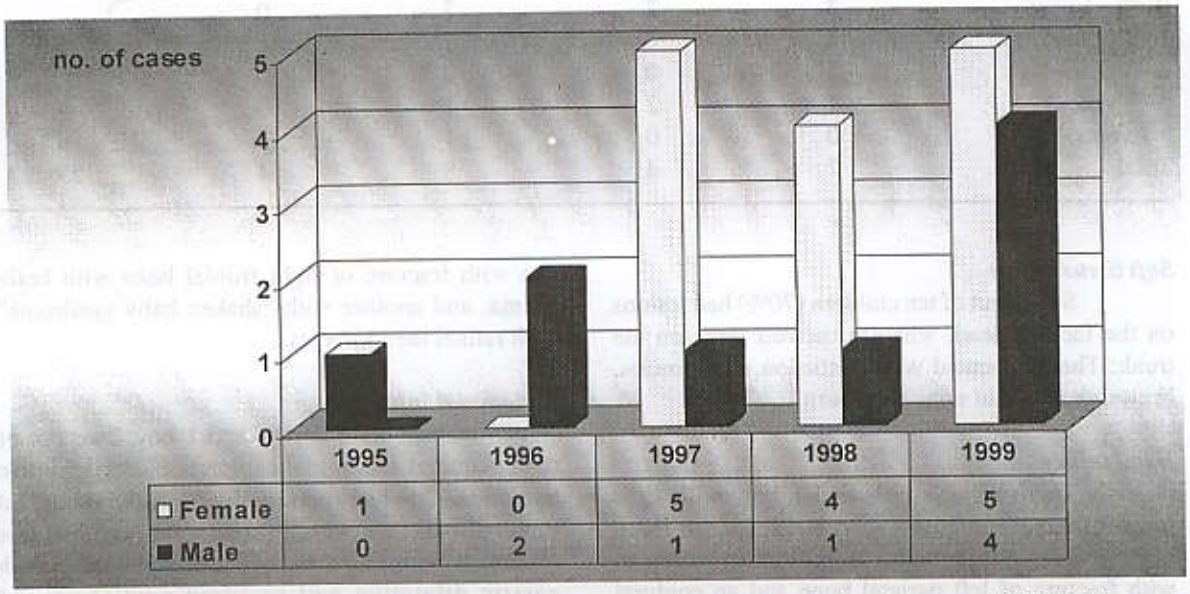


Figure 1. Diagram showing number of physically abused cases per year during the years 1995-1999 seen at the Queen Sirikit National Institute of Child Health.

children (17%) each in 3-7 years and older than 7 years groups.

Ten children (43%) presented with soft tissue injury (bruise, contusion, scar), seven (30%) with musculoskeletal injury, four (17%) with head injury, three (13%) with abdominal injury, two (9%) with intentional poisoning and six (26%) without records of positive finding or investigation. Eight cases (35%) presented with more than one injuries. There was no death at the first presentation.

Eight cases (73%) in the major injury group were younger than 3 years old. Six were female and two were male. Three of the four children (75%) with head injury, two out of three (67%) with abdominal injury, six out of seven (86%) with musculoskeletal injury, and both of the two children (100%) who suffered intentional poisoning were younger than 3 years of age. The mean ages of children with each type of inujury were19 months, 30 months, 19 months, and 2 months respectively. There were no children older than 7 years presented with major injury (Table 1).

In the group of 12 children who were younger than 2 years old, seven (58%) were investigated by skeletal survey, five of which had a positive skeletal survey.

Nineteen cases (83%) were evaluated by a psychiatrist, while the other four cases (17%) were not.

By history group

There were 3 girls and 3 boys, with ages ranging from 4 months to 11 years and 7months, most of whom had a history of being hit or kicked by someone in their families, but there was no record of a positive physical examination or any investigation. Some were admitted to the hospital for observation, such as a 4 months old girl whose father had attempted to strangle her.

Table 1. The relationship between age, sex and severity of physical abuse.

Age group	Number with major injury		Number with minor injury		Total
	Female	Male	Female	Male	
Birth - 1 year	3	2	3	0	15
1 - 2 years	2	0	1	1	
2 - 3 years	1	0	2	0	
3 - 7 years	1	2	1	0	4
> 7 years	0	0	1	3	4
Total	7	4	8	4	23

Soft tissue injury

Seven out of ten children (70%) had lesions on the face or head, whereas the rest were on the trunk. They presented with contusion, ecchymosis, bruise, or scar; but none with burn.

Head injury

There were 3 girls and 1 boy, with ages ranging from 2 months to 4 years and 2 months. Three of them were younger than 2 years old. One presented with fracture of left parietal bone and an epidural hematoma that required a burr hole operation to remove the blood clot, one with a subdural hematoma, one with fracture of right frontal bone with brain edema, and another with "shaken baby syndrome" with retinal hemorrhages.

Abdominal injury

There were 2 girls and 1 boy. Two out of three required abdominal exploration and definitive treatment. One had ruptured bladder; the other had ruptured pancreas with a pseudocyst. The last one presented with blunt trauma to the abdomen with gastric dilatation and required admission and observation.

Musculoskeletal injury

There were 5 girls and 2 boys, with ages ranging from 2 months to 5 years and 1 month of age. All seven cases presented with more than one fracture sites. Humerus was the most common fracture site. Most of the cases (6 out of 7) presented with multiple phases of radiographic bone healing.[4]

Intentional poisoning

Both cases were very young. One was 24 days old female baby who had been given shampoo, and the other was a 3 months old female infant who presented with esophageal leakage after given some kinds of chemical agent.

Who was the perpetrator?

Eight out of twenty three (35%) were abused by one of their parents, 4 (17%) by a step-parent, 4 (17%) by a caretaker, 3 (13%) by a relative, and in 4 (17%) the perpetrator was unknown.

Whom the children stayed with after being abused?

Ten out of twenty-three were living in a "secure" situation. Six out of twenty-three were cared by the child-welfare services. Five out of twelve (42%) children abused by a parent or step-parent were still living with the abusive parent or step-parent. There was no data available in two cases.

Case presentation (Figure 2A-2B)

A three months old female infant presented with history of fever and dyspnea for 4 days. She was diagnosed as aspirated pneumonia with esophageal leakage by chest x-ray and esophagogram.

She was finally proved to had ingested some kinds of erosive agent given by her substance-addicted father.



Figure 2A

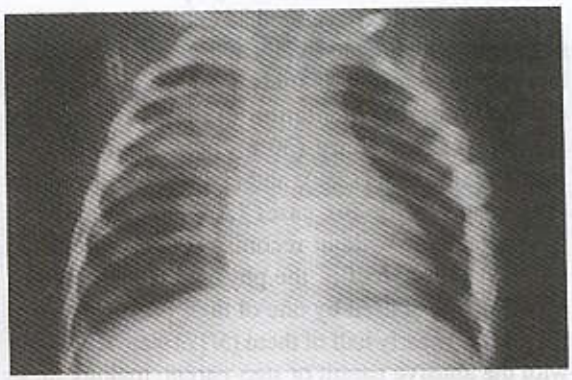


Figure 2B

Figure 2. A three months old female infant presented with esophageal leakage (Figure 2A) and aspirated pneumonia on right upper lobe with multiple ribs fracture on left posterolateral aspect (Figure 2B) after being given some kinds of chemical agent.

DISCUSSION

Most of the cases in this study, 20 cases (87%), occurred during the years 1997-1999. The obvious increase in the number of cases reported in the last 3 years may be due to many factors. It may be that increasing awareness of social services and doctors makes the problem more easily recognized. During this period Thailand also underwent an economic crisis. Statistic data from the Center for the Protection of Children's Rights Foundation (CPCRF); a non government organization for helping abused children in Thailand, show that the number of children helped between 1981-2000 was 445 with physical abuse and 1,131 with sexual abuse.[5] Although 129 physically abused cases were given help at the CPCRF over the past 5 years (1995-1999),[5] only 23 cases presented to or received medical attention at the QSNICH. Many cases might be treated at other hospitals. Many were probably untreated or did not seek medical help because nearly half of the cases (11/23) in this study were the group that sustained with severe form of injury.

McMahon[6] reported 371 children who were suspected of being physically abused. Of these, 92% had skin lesions. In this study, skin lesions were the most common presentation (43%), followed by musculoskeletal injury (30%), head injury (17%), abdominal injury (13%), and chemical intoxication (7%) respectively. Six cases (26%) presented with history of abuse without records of positive findings.

Nearly half of the physically abused cases (12/23) were abused by one of their parents or step-parents and nearly half of them (5/12) were still living with the abusive parent or step-parent, making these children at a high risk for recurrent abuse if no further protection program was put in place after the first assault.

Statistics of children receiving medical care at the QSNICH, including the well-baby clinic, from 1995-1999, show that there were about 300,000 patient-visits per year. It could be estimated that the incidence of physical abuse in QSNICH ranges from 0.3 to 3 :100,000 patient-visits during the year 1995-1999. The number seems to be very low comparing with the data from western country.[3] The restricted act for abuse in western country made abuse cases seldom missed. Otherwise, the different culture made cases in Thailand seldom occurred.

Children younger than 1 year of age comprised 7% of physically abused cases.[3] In this study, children younger than 3 years old were the most frequent abused group (15/23), especially children younger than 1 year (8/23). Three-fourths of the major physical injuries (8/11) also occurred in the younger age group (birth - 3 years of age). Conversely, all four cases of children who were older than 7 years presented with minor injury. It seems that younger children are at greater risk of abuse, and the younger the child, the more severely the child is abused.

Usually there is no gender predominance reported in physical abuse[7,8] or a higher incidence in boys.[9] In this study, the results were quite different in term of sex. There was a high incidence in girls in Thai society. Girls had a higher incidence than boys with a ratio of approximately 2:1 (15:8). The ratio increased to 4:1 (12:4) in children younger than 3 years. Considering the association between severity of injury and sex, girls were also more frequently sustained with major injury comparing with boys (7:4). This may be explained by the male priority concept in eastern culture. However, the data were collected from only one hospital. It might not represent the whole figure in Thailand.

The increasing incidence of physical child abuse may alarm for the importance of social support regime. Meanwhile the social and medical professional awareness with rigorous reporting system will make this problem in Thailand clearly viewed.

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