Physical Health Consequences of Child Sexual Assault in Police General Hospital

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Objective: *To determine demographic data and physical health consequences of Child Sexual Assault (CSA) victims at the Police General Hospital (PGH).*
Material and Method: *The medical records of CSA age one to 12 years at PGH between January 1, 2012 and December 31, 2012 were retrospectively reviewed.*
Results: *Of 124 child victims, 120 (96.8%) were female and four (3.2%) were male, aged between one and 12 years (mean, 8.12±3.54 years). Most of assailants were acquaintance or boyfriend. The majority of victims had no body injury, 114 (91.9%). Genital injuries of female victims were found in 40.8% of the cases and commonly seen at hymen. Anal injury was found in one case. Sexual transmitted infections included gonococcal 12.9%, chlamydial 4.0%, and trichomanas 1.7% were found. Two pregnancy cases were found.*
Conclusion: *Most of CSA had no physical injury. None of the injury cases required any suture or hospital admission. Majority of sexual injury was new hymenal tear.*

Keywords: *Child sexual assault (CSA), Child maltreatment, Sexual assault victim, Child abuse*

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Child sexual assault (CSA) is a global problem with serious life-long consequences[1]. Understanding the consequences of CSA is the first step toward identifying the right measures to make every child safer. Estimated prevalence of CSA in Thailand varied greatly due to the use of different definitions. Twenty-five percent of girls and 9% of boys are exposed to some form of sexual abuse during childhood worldwide[1]. Fry D and coworkers studied CSA in Asia Pacific region and found that approximately 20% of women and 5 to 10% of men report being sexually assault as children[2]. In Thailand, children (0-14 years) make up 19% of the population, which amounts to nearly 13 million people in 2013[3]. However, no study has been conducted on children age one to 12 for CSA. Police General Hospital (PGH) is a 580-bed hospital located in central Bangkok Thailand. All sexual assaulted victims reported to police were advised to have their physical examination at PGH. As a result, CSA data kept at PGH was a comprehensive one. It is timely to look-up the physical injury and assailant profiles of CSA cases from PGH record. The research about CSA is limited and there has been no report about factors associated with CSA in Thailand. This is the authors' reason to conduct the present research to determine physical health consequences of CSA.

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Objective

To describe characteristic of demographic data and epidemiology of CSA and health consequences of the studied population.

Material and Method

The medical records of all sexual assault victims between January and December 2012 were examined. The present study was approved by the Police General Hospital Administration Ethics Committee for research involving human subjects. Cases of children less than 13 years of age were

selected for the investigation. This investigation considered a child as a subject who is less than 13 years old at the date of medical examination. The children involved in this investigation were further subdivided into early children (EC) (1 to 7 years old) and late children (LC) (8 to 12 years old).

Definitions

A child age is less than 13 years old[5]. Subjects were divided in two groups, early child whose age were one to seven year (EC) and late child whose age were eight to 12 years (LC).

Sexual assaults refer to any form of forced or unwanted sexual contact ranging from forced touching and kissing to verbally or physically coerced, vaginal, oral, or anal penetration. These include situations in which the victim is unable to consent because of intoxication, inability to understand the consequences, misperceptions because of age, or other incapacities[6,7].

Severity of body trauma is classified into simple and complex injuries. The former is defined as no need for suturing or patient needs hospitalization, while the latter is case whose the wound needs suturing or hospitalization[8].

Physical health consequences are divided into body trauma and genital trauma.

Forensic evidence of genital penetrating injury refers to new hymenal tear.

Inclusion criteria

1. Child age less than 13 years of both genders.
2. CSA victims include child prostitution, commercial sexual exploitation of children, consensual abuse, or peer abuse.
3. CSA by evidence or suspected case.
4. CSA victims come to Police General Hospital and underwent medical examination.

Exclusion criteria

1. Non-actual sexual assault cases such as emotional and verbal abuse.
2. Non-physical contact assault such as exposure, voyeurism, and child pornography.
3. Victims of unknown age.
4. Victims refuse physical examination and forensic investigation.
5. Victims reported death.

Data collection

Data mining was performed retrospectively from collected information of medical records.

Data collected included demographic data of child victims and assailants, victim data on body trauma and genital trauma, evidence of sexual transmitted infections, and pregnancy. All data were entered into idatafax 4.3 software.

Statistical analysis

Analysis was performed by Chi-square test using STATA version 12.0 (StataCorp LP, Texas, USA).

Results

One hundred twenty four cases were collected during the study period. All inclusion and exclusion criteria were met. Fifty-two cases (42%) were under eight years old, while 72 cases (58%) were between 8 and 12 years old. The mean age of CSAs was 8.12±3.54 years (range 1-12 years). Victims younger than eight years old were considered as "early child or EC" and eight to 12 years old as "late child or LC". Basic information was shown in Table 1. Sixty-seven and 72% of early and late child were considered evidence cases respectively. Six percent (4) of late child group was of foreign nationality, three were from Laos and one from Myanmar. Most were female, but 6 and 1% of early and late child groups were male victims. Majority of both groups had separated or divorced parents (56% and 49% in EC and LC respectively). None in EC and 16% in LC reported sexual intercourse history. Majority of both groups (66% and 52% in EC and LC respectively) reported to receive medical attention within 72 hours.

Characteristics of assailants were presented in Table 2. Assailants were found to consume alcoholic beverage in 32% and 39% of EC and LC cases, while only 26 and 24% were using substance drugs, respectively. Majority of assailants (90% and 87% in EC and LC cases) were of acquaintance status to the victims. In EC and LC cases, 5 and 10% were the father or stepfather of the victims. EC group reported 21% and 37% assailants as close relatives and known adults, respectively, making known adult a majority group of attacker. On the other hands, the majority of assailant (36%) was boyfriend group for LC. Data from assailant relationship were statistically significant at $p<0.01$.

Table 3 revealed body injury data in CSA study. Majority of both EC and LC cases were 96% and 89%, respectively. There was no body injury report. Body injury cases in EC revealed all trunk injury (2 cases 100%). In LC (eight cases) majority of body injury report revealed injury in head, face, neck, trunk, upper limb, and lower limb regions at 50%, 63%, 63%,

Table 1. Basic information on CSA cases at Police General Hospital, Thailand in 2012

Characteristics	Age (years)		*p*-value
	1-7 (n = 52)	8-12 (n = 72)	
Feature of victims			0.56
Evidence	35 (67.3)	52 (72.2)	
Suspected case	17 (32.7)	20 (27.8)	
Nationality of victims			0.08
Thai	52 (100.0)	68 (94.4)	
Foreigner	0 (0)	4 (5.6)	
Gender			0.17
Female	49 (94.2)	71 (98.6)	
Male	3 (5.8)	1 (1.4)	
Parents status			0.56
Living together	22 (42.3)	32 (45.1)	
Separated or divorced	29 (55.8)	35 (49.3)	
One parent died	1 (1.9)	4 (5.6)	
History sexual intercourse			0.01
Yes	0 (0)	11 (15.7)	
No	52 (100.0)	59 (84.3)	
Time lag to medical attention (days)			0.36
<3	31 (66.0)	35 (51.5)	
3-7	5 (10.6)	9 (13.2)	
>7	11 (23.4)	24 (35.3)	

CSA = child sexual assault
Total numbers in each group may differ because of missing data, Chi-square test, values are presented as number (%)

Table 2. Characteristics of assailants in CSA cases at Police General Hospital, Thailand in 2012

Assailant characteristics	Age (years)		*p*-value
	1-7 (n = 52)	8-12 (n = 72)	
Alcohol consumption			0.48
Yes	17 (32.7)	28 (38.9)	
No	35 (67.3)	44 (61.1)	
Substance used by assailant			0.94
Yes	8 (25.8)	11 (24.4)	
No	23 (74.2)	34 (75.6)	
Relationship to victims			0.80
Accquaintance	43 (89.6)	59 (86.8)	
Stranger	5 (10.4)	9 (13.2)	
Relationship of assailant to victims			<0.01
Father/stepfather	2 (4.7)	6 (10.2)	
Relatives/siblings	9 (20.9)	7 (11.9)	
Acquaintance/friend/peer	16 (37.2)	7 (11.9)	
Boyfriend	0 (0)	21 (35.6)	
Employer	0 (0)	2 (3.4)	
People just known*	3 (7.0)	9 (15.3)	
Other**	13 (30.2)	7 (11.9)	

Total numbers in each group may differ because of missing data, Chi-square test, values are presented as number (%)
* Less than 1 month
** Other such as prostitute, neighbor, servant, babysitter, friend of relative or parent

Table 3. Body injuries in CSA cases at Police General Hospital, Thailand in 2012

Physical injuries	Age (years)		*p*-value
	1-7 (n = 52)	8-12 (n = 72)	
Body trauma			0.14
No body trauma	50 (96.2)	64 (88.9)	
Body trauma	2 (3.9)	8 (11.1)	
Simple injuries*	n = 2	n = 8	0.14
Head region	0 (0)	4 (50.0)	0.08
Face region	0 (0)	5 (62.5)	0.05
Neck region	0 (0)	5 (62.5)	0.05
Trunk region	2 (100)	6 (75.0)	0.32
Upper limb region	0 (0)	5 (62.5)	0.05
Lower limb region	0 (0)	5 (62.5)	0.05
Complex injuries**	0 (0)	0 (0)	

Chi-square test, values are presented as number (%)
* Simple injuries is defined as no need for suture or admission
** Complex injuries defined as the wound that needed suture or admission

Table 4. Genital injuries of CSA cases in Police General Hospital, Thailand in 2012

Characteristics	Age (years)		*p*-value
	1-7 (n = 49)	8-12 (n = 71)	
Female genital trauma	26 (53.1)	23 (32.4)	0.04
Anal injuries	1 (2.0)	0 (0)	0.44
Vulva injuries	6 (12.2)	2 (2.8)	0.14
Labia minora injuries	10 (20.4)	10 (14.1)	0.18
Labia majora injuries	7 (14.3)	7 (9.9)	0.34
Vaginal injuries	0 (0)	2 (2.8)	0.30
Hymenal injuries			<0.01
New hymenal tear*	14 (28.6)	18 (25.4)	
Old hymenal tear	7 (14.3)	42 (59.2)	
Intact	25 (51.0)	10 (14.1)	
Sexually transmitted infections[a]	7 (14.3)	12 (16.9)	0.63
Gonococcal infection	7 (14.3)	9 (12.7)	0.01
Chlamydial infection	0 (0)	5 (7.0)	0.01
Trichomonas infection	0 (0)	2 (2.8)	0.04
HIV infection	0 (0)	1 (1.4)	0.28
Male genital trauma	n = 3	n = 1	
Anal injury	0 (0)	0 (0)	
Penile injury	0 (0)	0 (0)	

HIV = human immunodeficiency virus
Chi-square test, values are presented as number (%)
* Such as laceration, abrasion, contusion, [a] First visit laboratory result of female

75%, 63%, and 63%, respectively. None of the injury required any suturing or hospitalization.

Table 4 presented sexual injury information collected from the present cases. In EC and LC groups, 53% and 32% revealed female genital trauma respectively. Most injuries were at labia minora (20% and 14%, respectively). New hymenal tear was found in 29% and 25% of EC and LC cases, respectively, but EC cases had 51% intact hymen. New hymenal tear was one of the indication that sexual intercourse was attempted.

Fourteen and 17% of EC and LC cases reported sexual transmitted infections. Majority of cases got Gonococcal infection (14% and 13% in EC and LC, respectively). One case (1%) of LC case had HIV infection, which received appropriated treatment.

Three and one cases were of male victim reported in EC and LC, respectively. However, medical

examination revealed neither anal nor penile injuries in all cases.

Discussion

Sexual assault is a physical and mental health trauma. It is a more serious problem for the society when victims are young children. Very few reports can be found published exclusively about CSA.

Ninety-six and 89% of EC and LC cases reported no body injury compared to Teerapong et al reported of 62% physical injury in victims of all age (1-60 years old), while Suthaporn et al[9] reported physical injury at 36% and 15% in adult and adolescence victims of the same country origin, respectively. Sudupe et al[10] from Spain reported physical injury in victims less than 12 years old at 6.2% (94% no body injury). Based on the data from the present study, the majority of cases knew the assailants as someone close to the family; it was then not surprising that the victims was coerced into the sexual abuse without much struggle, which resulted in small percentage of injury. In the case with body injury, the injury was found in many areas of the body. However, none required any suture or hospitalization.

In EC and LC groups, 53% and 32% revealed female genital trauma, respectively. Most were injured at labia minora. New hymenal tear (indication of attempted sexual intercourse) was found in 29% and 25% of EC and LC cases, respectively. Spermatozoa samples were found in most hymenal tear cases in both EC and LC group. If an erected adult penis had penetrated an early child size vagina, there would be tissue damage that required suturing. Data suggested that most EC assailants finished their sexual activities just by premature ejaculation without successful forced penetration. There were two reported cases of pregnancy. Both pregnant victims were 12 years old.

Fourteen and 17% of EC and LC cases respectively reported sexual transmitted infections. Suthaporn et al[9] report STI after sexual assaults in Thailand at 10.75 to 13.9% in adolescence and adult victims, respectively. Other publication reported STI in assaulted victim at variation between 0 and 26.3% and HIV between 0.1 and 3%[11-13]. Why was the STI rate in CSA similar to adolescence and adult victim? Most of these child victim cases in the present study were repeatedly assaulted. Medical questions revealed that in EC cases, these victims lived in the same household with their stepfathers or grandparents who assaulted them repeatedly. In LC cases, their friends or boyfriends coerced them into sexual activity without the victims' clear understanding of the consequences.

Thirty-two and 34% of assailants were reported to consume alcoholic beverage in EC and LC cases, respectively, while 26% and 24% were substance and drugs using, respectively. Majority of assailants were of acquaintance status to the victims.

The fact that the majority of the assailants were known by their child-assaulted victims was in accordance with other publication. Hwa and coworker reported in Taiwan that 3.4% of perpetrators were family members of assaulted victims[14]. Suthaporn reported that 5.12% of sexual assailant in adolescence victims were stepfathers, fathers, and close relatives of the victims[9]. In the current study, the percentage of perpetrators in EC and LC cases were as high as 25.6% and 22.1%, respectively to be family members or acquaintances. This is an alarming data.

There is an increased tendency of sexual abuse on children and adolescents due to changes in social, economic, and family structure[15]. Around half of all victims in the present study lived in a home where the parents were separated or divorced. The high percentage of CSA (25.6% and 22.1% in EC and LC, respectively) of children aged one to 12 from a broken home getting coerced into repeated sexual activity by stepfathers, fathers, and close relatives showed that the children welfare were not adequately protected. Children of this age group may be safer if the community got together and provided quality community childcare while parents were at work, to lessen this possibility of being abused by their own family acquaintance.

Conclusion

Majority of CSA victims under 12 years old had no body injury report. None of the injury cases required any suture or hospitalization. Majority of sexual injury was new hymenal tear. Sexual transmitted infections were reported mostly from repeated assault cases, mainly from stepfathers, fathers, or close relatives. Half of assaulted children came from broken home with separated or divorced parents. There is an increased tendency of sexual abuse on children and adolescences due to changes in social, economic, and family structure. The study result suggests that many departments should get together to create an affordable community childcare, or after school program for children of early and late childhood age. It could jump start children development while lower children sexual assault risk, possibly in time of cultural and economic change.

What is already known on this topic?

Child sexual assault (CSA) is a global problem with serious life-long consequences[1]. All physical injuries were of mild to moderate degree. Prevalence of STIs and incidence of pregnancy after sexual assault were very low[4]. The research about CSA in Thailand is limited and there has been no report about factors associated with CSA.

What this study adds?

Most of assailants were acquaintance or boyfriends. The majority of victims had no body injury, 114 from 124 cases (91.9%). Genital injuries of female victims were found in 40.8% of cases and commonly seen at hymen. Anal injury was found in one case. Sexual transmitted infections included gonococcal 12.9%, chlamydial 4.0%, and trichomanas 1.7% were found. Two pregnancy cases were found.

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Potential conflicts of interest

None.

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ผลกระทบทางสุขภาพของเด็กที่ถูกล่วงละเมิดทางเพศที่โรงพยาบาลตำรวจ

ปฐมพล พัชรบำรุง, เสรี ธีรพงษ์, คมสันติ์ สุวรรณฤกษ์, กรณ์กาญจน์ ภมรประวัติธนะ, อลิศรา แสงวิรุณ, กิตินภา นภากร

วัตถุประสงค์: *เพื่อศึกษาลักษณะทางประชากร และการบาดเจ็บทางร่างกายของเด็กที่ถูกล่วงละเมิดทางเพศที่มารับการรักษาที่โรงพยาบาลตำรวจ*

วัสดุและวิธีการ: *การศึกษาแบบย้อนหลัง โดยเก็บข้อมูลจากเวชระเบียนผู้ป่วย ในกลุ่มตัวอย่างประชากรอายุ 1-12 ปี ระหว่างวันที่ 1 มกราคม พ.ศ. 2555 ถึง 12 ธันวาคม พ.ศ. 2555*

ผลการศึกษา: *จำนวนเด็กที่ถูกกระทำชำเราทางเพศทั้งหมด 124 ราย เหยื่อเป็นเพศหญิง 120 ราย (96.8%) เพศชาย 4 ราย (3.2%) ช่วงอายุ 1-12 ปี (อายุเฉลี่ย 8.12±3.54 ปี) ผู้กระทำชำเราส่วนใหญ่เป็นคนรู้จักคุ้นเคย หรือ คนรัก เหยื่อส่วนใหญ่ 91.4% (114/124) ไม่พบบาดแผลทางร่างกาย การบาดเจ็บที่อวัยวะเพศหญิงพบ 40.8% (49/120) ซึ่งมักพบที่เยื่อพรหมจารี บาดแผลที่ทวารหนักพบ 1 ราย การติดเชื้อทางเพศสัมพันธ์พบเหยื่อติดเชื้อหนองในแท้ 12.9% เชื้อหนองในเทียม 4.0% การติดเชื้อทริโคโมแนส 1.7% ตามลำดับ พบเหยื่อตั้งครรภ์ 2 ราย*

สรุป: *การล่วงละเมิดทางเพศในเด็กส่วนใหญ่ไม่พบบาดแผลที่ร่างกาย ไม่พบการบาดเจ็บที่จำเป็นต้องเย็บแผล หรือ ต้องรับการรักษาที่โรงพยาบาล การบาดเจ็บทางเพศส่วนใหญ่เป็นการฉีกขาดเยื่อพรหมจารีแบบบาดแผลใหม่*