Original Article

Female Child and Adolescent Sexual Abuse Cases Reported at the Geneva University Hospitals Between 2006 and 2014: A Retrospective Study

Annalisa Rizzo MD [1], Dominique Ricard MD [1], Romano La Harpe MD [2], Tony Fracasso MD [2], Michal Yaron MD [1,*]

[1] *Department of Woman, Child and Adolescent, Geneva University Hospitals, Geneva, Switzerland*
[2] *University Center of Legal Medicine, Geneva University Hospitals, Geneva, Switzerland*

A B S T R A C T

Study Objective: To provide an objective quantification of the demographic characteristics and clinical findings related to female child and adolescent sexual abuse cases reported at the Geneva University Hospitals.
Design: Retrospective study.
Setting: Obstetrics and gynecology emergency unit.
Participants: Female children (0-12 years old) and adolescents (13-20 years old) seeking primary care after sexual assault.
Interventions: None, observational study.
Main Outcome Measures: Delay from assault to time of presentation to primary care presentation, type of perpetrators, and the presence gynecological and bodily lesions.
Results: Compared with children, a significantly higher proportion of adolescents presented to the hospital within 24 hours (134/289 (46.4%) vs 7/33 (21.2%); $P = .006$). Perpetrators were family members in 15/36 (41.7%) of children and in only 14/304 (4.6%) of adolescent patients ($P < .00001$); perpetrators were unfamiliar/nonrelated people in 8/36 (22.2%) of children and in 166/304 (54.6%) of adolescent patients ($P < .0003$). We did not find a significant difference between the 2 age groups with regard to the presence of gynecological lesions (15/35 (42.9%) of children and 91/298 (30.5%) of adolescent patients). However, we found a significant difference in the proportion of patients with bodily lesions such that 11/36 (30.6%) of children and 175/300 (58.3%) of adolescents ($P = .002$) were afflicted with bodily lesions.
Conclusion: To our knowledge this is the first study to evaluate child and adolescent sexual abuse cases on the basis of real-life data collected in Switzerland. Our results highlight important differences in child and adolescent sexual assault in terms of delay in presentation to primary care, perpetrator's relation to the victim, and presence of bodily lesions. This study confirms that gynecological findings alone are not consistently present in the patients who seek primary care after sexual assault.
Key Words: Adolescent health, Sex offenses, Sexual child abuse, Primary prevention, Public health

Introduction

Child and adolescent sexual abuse generates deep concern worldwide as a social phenomenon and pressing public health issue. The traumatic effect of sexual abuse is well documented,[1,2] notably as a contributory factor in poor school performance, substance abuse, delinquency, prostitution, sexual dysfunction, mental illness, suicide, and transmission of abusive behavior to subsequent generations.[3]

In 2016, 7329 sexual abuse cases were registered in Switzerland (1230 involved children of any gender),[4] emphasizing the need for further epidemiological studies in this area, aiming to support more efficient prevention and intervention strategies. Child and adolescent sexual abuse had previously been investigated in Switzerland through a cross-sectional school survey among ninth grade pupils in 1996: the study showed that as many as 1 in 3 girls and 1 in 10 boys reported sexual abuse at least once in their lifetime.[3] In 2017, child sexual abuse represented 15.7% (271/1730 cases) of all violent cases involving minors reported in Swiss paediatric clinics, showing a 10% annual increase. This confirmed a trend consistent for 9 consecutive years.[5] During the same period, in the Canton of Geneva child sexual abuse represented 13.5% of all sex crimes (56/416 cases).[6] In 2018, the most recent Swiss survey on this topic included 7142 people aged between 24 and 26 years and showed that girls were 5 times more likely than boys (16% vs 3%) to report a sexual assault or abuse. The mean age at the time of the assaults was similar in both sexes, just younger than 15 years old.[7] A systematic literature review conducted in 2013 included 55 studies across 24 countries showed that the pooled prevalence of sexual abuse for girls was estimated as 9% for forced intercourse (95% confidence interval, 6%-14%) and 15% for mixed sexual abuse (95% confidence interval, 9%-24%).[8]

The role of gynecological examinations in the assessment of sexual abuse has been unclear, and also deemed as a source of controversy.[9] Over the past few years several studies concluded that the most important feature for legal conviction is the child's testimony and not the genital findings alone: therefore, it is crucial that the child's questioning is performed by specialized personnel with an aim

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* *Address correspondence to:* Michal Yaron, MD, Geneva University Hospitals, Department of Woman, Child and Adolescent, Boulevard de la Cluse 30, 1205 Geneva, Switzerland; Phone +41 22 372 68 16
E-mail address: michal.yaron@hucge.ch (M. Yaron).

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to obtain a detailed, credible, and well presented testimony in court.[10]

In this study, we report an objective quantification of the demographic characteristics and clinical findings related to female child and adolescent sexual abuse patients who presented to the Geneva University Hospitals between 2006 and 2014.

Materials and Methods

The study was on the basis of retrospectively collected data from all patients admitted to the obstetrics and gynecology emergency unit at Geneva University Hospitals for gynecological examination after sexual assault from 2006 to 2014. This study was approved by the research ethics committee and was carried out in accordance with the ethical standards as outlined in the 1964 Declaration of Helsinki and its later amendments.

The exam was carried out by trained gynecologists, forensic doctors, and nurses according to the local guidelines of the Geneva University Hospitals.[11] The Geneva University Hospitals is the largest University Hospital of Switzerland with its 1920 beds, accounting for 63,247 inpatient cases, more than a million outpatient cases, and 4182 births according to 2018 data.

In this study, we collected the data of 836 female victims. We then selected 340 patients aged between 0 and 20 years to be included in our study. Subsequently, we divided these patients into 2 groups: children aged 0-12 years and adolescents aged 13-20 years.

Primary study outcomes comprise the delay in presentation to primary care (ie, the interval between time of assault and time of presentation to primary care), the perpetrator's relation to the victim, and the presence gynecological and bodily lesions.

We assessed the presence of gynecological lesions by systematically examining the vulva, vagina, hymen, anus, and oral cavity. We assessed the presence of bodily lesions by systematically inspecting the upper and lower extremities, the head, thorax, neck, back, and abdomen. Gynecological and bodily lesions were classified in ecchymoses, dermabrasions, erythema, sores, edema, fractures, and contusions.

We report the differences in delay in presentation to primary care between the 2 groups. In addition to this, we report and compare the differences of perpetrators and the relation to the victims, time of aggression, and gynecological and bodily lesions between and within the 2 groups. Statistical significance in these differences was assessed using Fisher exact test.[12] The threshold for statistical significance α was set to 0.05. Significance thresholds were Bonferroni-corrected to account for repeated tests. All calculations were performed using SPSS Statistics version 20 (IBM Corp).

Results

Delay in Presentation to Primary Care

A significantly higher proportion of adolescent patients than children presented to the hospital within 24 hours ($P = .006$; Table 1). This difference is statistically significant at $\alpha = 0.05$.

Perpetrator Relation to the Victim and Time of the Aggression

Perpetrators were family members in 41.7% of assault cases involving children and only 4.6% in those involving adolescents ($P < .00001$; Table 2). This difference is statistically significant at $\alpha = 0.016667$.

Perpetrators were acquaintances in similar proportions within the 2 groups, and the difference between groups was not statistically significant.

Perpetrators were unfamiliar/nonrelated to 22.2% of children and to 54.6% of adolescent patients ($P < .0003$; Table 2). This difference is statistically significant at $\alpha = 0.016667$.

Among child assault cases, the most frequent perpetrators were nonrelated acquaintances if the event took place during school time (Monday to Friday, 8 AM to 5 PM), whereas family members were the most frequent offenders out of school hours. Although these data did indicate trend, it did not reach statistical significance ($P = .0805$; Table 3).

Gynecological and Bodily Lesions

We did not find a significant difference in presence of gynecological lesions between the 2 age groups (42.9% of children and 30.5% of adolescents; Table 4). However, we found that the rate of bodily lesions were significantly more frequent in adolescents compared with children: 58.3% and 30.6%, respectively ($P = .002$; Table 4). This difference is statistically significant at $\alpha = 0.05$.

Discussion

Child sexual abuse is a worldwide problem and does not seem to be decreasing over time. High level of poverty, low level of parental education, absent or single parenting, parental substance abuse, domestic violence, or limited affection from caregivers are established risk factors for child sexual abuse.[13] Additionally, children and adolescents that inhabit conflict or post conflict environments are also considered to be at higher risk.[14] The presumption that sexual abuse is more common in low-income populations and developing countries is dangerous. DeMause affirmed that the problem of incest and child molestation is widespread "at most places and most times."[15] Although Switzerland is one of the wealthiest countries of the world and Swiss people yield one of the highest gross domestic product per capita, child sexual abuse is present and poses a serious social problem that requires scrutiny and appropriate preventive actions.

Table 1
Delay in Presentation to the Hospital for Children (12 Years Old and Younger) and Adolescents (13 Years Old and Older) Groups

Group	Presentation to Primary Care		*P* (Fisher Exact Test)
	Within 24 Hours	24 Hours or More	
Children	7 (21.2%)	26 (78.8%)	.006*
Adolescents	134 (46.4%)	155 (53.6%)	

* Statistical significance.

Table 2
Number of Cases Within Each Group Analyzed According to Type of Perpetrator

Group	Perpetrator Type		*P* (Fisher Exact Test)
	Family	Acquaintance and Unknown	
12 Years or younger	15 (41.7)	21 (58.3)	<.00001*
13 Years or older	14 (4.6)	290 (95.4)	
	Acquaintance	Family and unknown	
12 Years or younger	13 (36.1)	23 (63.9)	.7198
13 Years or older	124 (40.8)	180 (59.2)	
	Unknown	Family and acquaintance	
12 Years or younger	8 (22.2)	28 (71.8)	.0003*
13 Years or older	166 (54.6)	138 (55.4)	

Data are presented as n (%) except where otherwise noted.
* Statistical significance. Bonferroni-corrected significance threshold was set to 0.05/3 = 0.016667.

In the present study, we analyzed all child and adolescent sexual abuse medical records in the database of the Geneva University Hospitals between 2006 and 2014. We report 3 significant findings. First, children are more likely to present to primary care after 24 hours of the onset of the event compared with adolescents and young adults. This delay can be explained by the longer duration to disclosure of wrongdoing. Besides this, there might be further hesitation before disclosure, because the aggressor is often a family member in this age group. Studies have established that timely and convincing disclosure by the child greatly increases the likelihood that the case will be reported, investigated, and that charges will be filed. Also, the prosecution of the abuser will most likely result in a conviction.[16] However, the disclosure by victims of child sexual abuse is often delayed, partial, or dismissed altogether, and recantation is common.[17,18] Children are often manipulated to feel guilty or responsible for the abuse and are often preoccupied with the possible consequences for the perpetrator, who is frequently a familiar figure.[13] Kogan hypothesized that girls who feared for their lives or experienced penetration were more likely to disclose, seek protection, and require medical treatment.[19] Contrary to this study, Priebe and Svedin reported that the greater the severity of the abuse the less likely the victim will talk to a parent or family member and seek assistance.[17] Others factors, such as culture and gender, might also influence willingness to report experiences of child sexual abuse. This finding highlights the importance of sexual education at home and at school from a very young age with a focus on physical and emotional boundaries, and teaching children and adolescents to be comfortable when disclosing any breach of those limits.

Table 3
Type of Perpetrators and Time of the Aggression Within the Children (12 Years Old and Younger)

Group	Perpetrator Type		*P* (Fisher Exact Test)
	Family	Acquaintance	
School time	2 (25%)	6 (75%)	.0805
Rest of the time	9 (69.2%)	4 (30.8%)	

In total, we observed 8 cases within school time and 13 cases within the rest of the time.

Table 4
Gynecological and Bodily Lesions

Group	No	Yes	*P* (Fisher Exact Test)
	Gynecological Lesions		
12 Years and younger	20 (57.1%)	15 (42.9%)	.178
13 Years and older	207 (69.5%)	91 (30.5%)	
	Bodily lesions		
12 Years and younger	25 (69.4%)	11 (30.6%)	.002*
13 Years and older	125 (41.7%)	175 (58.3%)	

* Statistical significance. Bonferroni-corrected significance threshold was set to 0.05/3 = 0.016667.

The second finding relates to the type of perpetrators and to the time of aggression. Overall, we found that perpetrators were family members in more than 40% of the examined children, whereas this proportion was less than 5% in adolescent patients. Furthermore, we also found that perpetrators were unfamiliar/nonrelated to the victim in approximately 20% of child cases and in more than a half of adolescent cases. In addition, our results show that 75% of assaults in children were committed by an acquaintance during school time. Our findings differ from a Swiss study published in 2002, which concluded that family members and acquaintances were not the leading offenders of Swiss child sexual abuse cases.[20] The aforementioned study was on the basis of a questionnaire survey on psychosomatic well-being, sexual actions, and perpetrator strategies, as well as motivations for tolerating long periods of abuse during childhood. A possible explanation for the discrepancy in findings could be related to the manner the data were collected: in our study the database was formed by professional staff at the time of the medical visit, which is more objective compared with surveys, which often show social bias.

The third and last finding concerns the gynecological and bodily lesions for children and adolescents: both groups presented similar trends with regard to gynecological lesions, whereas between group trends were the opposite regarding bodily lesions. In particular, bodily lesions were present in approximately one-third of children and in slightly less than two-thirds of adolescents. We relate these results to the fact that older girls possibly try to physically defend themselves and the bodily lesions could be the result of a physical opposition, whereas children do not attempt to fight back. In addition, less invasive acts such as touching and fondling are known to occur much more frequently than penetration in cases of younger children.[21] Moreover, the delay in seeking medical examination might also explain the absence of evident genital or bodily lesions.[22]

This study has several limitations. First, the sample size of the child group was relatively small. Second, the gynecological examination was carried out by different medical doctors and therefore the level of experience in child sexual abuse was not controlled. Third, our analyses did not include whether patients were referred to the hospital by an agency such as law enforcement or from their primary care physician, accompanied by family members or acquaintances, or on their own. In addition, data on other patient long-term outcomes such as psychological sequelae, infections, pregnancies, and the conviction of the perpetrator were not collected, and our sample only included female

patients because the data were collected in an obstetrics and gynecology emergency unit. Therefore, further standardization of research tools, methods, and a larger data sample is necessary to support our conclusions.

Despite the limitations mentioned, we report important results supported by data collected using a rigorous protocol with precise history and description of lesions. A joint gynecologist, forensic physician, and nurse team performed all of the examinations to secure objective information. Our results can be used as effect size estimates to power future prospective studies in public health and child sexual abuse.

Overall, our findings highlight the importance of prevention strategies and sexual education. Primary prevention could start by aiming to teach infants the correct names for the reproductive organs. The use of euphemisms might give the child the impression that these organs are embarrassing and shameful and any discussion about them is prohibited.[23] Involving parents in the educational process might help decrease the secrecy surrounding topics of child sexual abuse and promote disclosure when intimate boundaries are breached. Because of the body of evidence that shows the negative long-term sequelae of sexual abuse on victims, prevention and early intervention are paramount.

To our knowledge this is the first study of child and adolescent sexual abuse using real-life data in Switzerland. We believe our study could be useful in improving prevention and intervention strategies for child sexual abuse victims.

Our study, in line with other studies, confirms that anatomical genital findings are not always present and should not be used as confirmation for child sexual assault.[9,10,24] The most reliable criteria to make a diagnosis of sexual abuse should remain the child's testimony.[9]

We believe that by improving continuous sexual education from early childhood and onward,[25] early disclosure and access to expert primary care by child sexual abuse victims will be improved and hopefully long-term sequelae will be reduced as a result of early intervention.

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