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Girls Who Disclose Sexual Abuse: Urogenital Symptoms and Signs After Genital Contact

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What's Known on This Subject

Girls who disclose inappropriate genital contact report experiencing a variety of urogenital symptoms and signs, yet no studies have been published describing the type and frequency of urogenital symptoms and signs these girls experience in relation to the inappropriate contact.

What This Study Adds

To our knowledge, this is the first study that describes the type and frequency of urogenital symptoms/signs reported by girls who disclose inappropriate genital contact, which is useful for designing prospective controlled studies and for medically evaluating girls disclosing sexual abuse.

ABSTRACT

BACKGROUND. Little information is available about idiosyncratic historical details provided by sexually abused girls, yet this information can help medical professionals diagnose sexual abuse.

OBJECTIVES. Our goals were to describe types and frequencies of urogenital symptoms/signs reported by girls who disclosed direct genital contact and to explore factors associated with this reporting.

METHODS. We reviewed 161 medical charts of 3- to 18-year-old girls who disclosed sexual abuse by direct genital contact for urogenital symptoms/signs, type of genital contact (oral, object, digital, or genital), time interval between last perpetrator contact and physical examination, age and sexual maturity at the time of last perpetrator contact, genital findings, and other medical diagnoses. Regression analyses were performed to determine factors that were most predictive of symptom/sign reporting.

RESULTS. Many of the girls reported multiple types of genital contact; 33% reported oral/object-genital contact, 72% reported digital-genital contact, and 55% reported genital-genital contact. Sixty percent of the girls reported experiencing ≥ 1 symptom/sign; 53% of the total sample had genital pain, 37% had dysuria, and 11% had genital bleeding. Symptoms/signs were highly associated with genital-genital contact: 48% of the girls reporting genital-genital contact had dysuria compared with 25% of girls not reporting genital-genital contact, 72% had genital pain/soreness compared with 32% not reporting genital-genital contact, and 16% had bleeding compared with 4% of those not reporting genital-genital contact. Using regression analysis, the strongest factor predictive of symptom reporting by the girls was genital-genital contact.

CONCLUSIONS. Sexually abused girls who experienced direct genital contact frequently reported symptoms related to the abusive episode. These symptoms were reported most frequently with genital-to-genital contact. This information sheds some light on the mechanism of injury leading to symptom reporting and can be used to further study symptoms/signs reported by sexually abused girls compared with the general population. *Pediatrics* 2008;122:e281–e286

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Key Words

sexual abuse, urogenital symptoms, dysuria, girls

Abbreviation

STI—sexually transmitted infection

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GIRLS WHO EXPERIENCE sexual abuse rarely exhibit abnormal genital findings. In fact, absence of genital findings is the rule rather than the exception.^{1,2} In most cases, the final diagnosis of sexual abuse is based on the girl's history, especially if she provides idiosyncratic details unique to her situation.³ Guidelines for the medical care of children who are suspected to have been sexually abused recommend obtaining histories about anogenital pain, bleeding, itching, discharge, or dysuria,⁴ but little has been published to describe the type and frequency of urogenital symptoms and signs reported by girls after sexual abuse.

The primary objective of this study was to fill this gap in the literature by describing (1) the type and frequency of urogenital symptoms/signs reported by sexually abused girls who specifically disclosed inappropriate genital contact under their clothes, (2) the impact of time lapses between last perpetrator contacts and sex abuse-specific medical examinations on the frequency and type of symptom/sign reporting by girls, and (3) parental knowledge of

TABLE 1 Reasons for Case Exclusion and Number of Cases Excluded for Each Reason

Reason for Exclusion	No. (%) of Cases (N = 323)
Lacked expressive ability to provide a history	35 (10.8)
No parent or guardian available to provide information	56 (17.3)
Child was referred for genital complaints or behaviors not caused by sexual abuse	38 (11.8)
Child did not disclose genital touching under clothing	70 (21.7)
Child refused the physical examination	12 (3.7)
Child unable or unwilling to participate in the history-taking process	109 (33.7)
Child provided no disclosure to suspect sexual abuse occurred	97 (30.0)
Child previously examined by same doctor	2 (0.6)

their daughters' urogenital complaints, their reasons for seeking medical intervention during the time period their daughters were being sexually abused, and medical diagnoses offered to explain these symptoms.

Secondary objectives of this study were to determine if factors such as (1) the type of genital contact experienced, (2) presence of genital trauma on physical examination, (3) presence of sexually transmitted infections (STIs), (4) age category of the perpetrator, (5) the perpetrator's relationship to the child, and (6) the child's age and sexual maturity at the time of last perpetrator contact were associated with reporting postcontact genital symptoms/signs.

METHODS

We reviewed medical charts of 3- to 18-year-old girls who were referred to a regional child abuse diagnostic and treatment center. This center's catchment area includes 7 economically diverse counties in southern New Jersey with a population of 1 682 549, including ~210 319 girls younger than 18 years.⁵ All records were generated between January 2002 and January 2007. Study-exclusion criteria are listed in Table 1. Age, race, and ethnicity of study-group subjects were compared with those of the girls in the excluded group. No other socioeconomic information was available for additional demographic analysis. This study was approved by the institutional review board of the University of Medicine and Dentistry of New Jersey School of Osteopathic Medicine.

Only charts of girls examined by 1 physician (Dr Finkel) were reviewed, because this physician has developed a consistent history-taking process during 25 years of practice as a child sexual abuse expert. All medical charts included a thorough review of systems with the girl's parent/guardian and documentation of the history-taking process with the child. Parents were asked directly if their daughters ever complained of burning with urination or other urogenital symptoms and if they sought medical care and received diagnoses to explain these symptoms.

Although the process used to obtain the girl's medical history is described elsewhere,⁶ a brief description of the typical process for obtaining the part of the medical history relevant to assess urogenital symptoms/signs is

offered here. After separating the patient from her parent, the physician engaged her in general discussions about personal body safety. He ended this discussion with, "Did anything ever happen to you?" If she disclosed she was touched on her genitalia under her clothes, open-ended questions were asked about bodily sensations during and after genital contact. If she did not provide other information, she was asked, "How did that feel?" If she said she had no bodily discomfort, no additional questions were asked. If she reported symptoms, specific questions were asked such as, "Did it bother your body, your feelings, or both?" or "What did it bother you to do?" No additional questions were asked after the patient stated that nothing else bothered her. During this process, girls were never specifically asked if it hurt to urinate, if they had genital pain, or if they saw blood.

A research assistant trained to use a data-abstraction tool systematically abstracted information from the medical charts. Data were analyzed by using SPSS 12 (SPSS Inc, Chicago, IL). The number and type of urogenital symptoms/signs reported by girls after inappropriate genital contact were calculated. The number of symptoms/signs reported by each girl was compared with the time interval between last known contact with the perpetrator and the sex abuse-specific medical examination. Also abstracted were parents' responses to questions about their daughters' previous urogenital symptoms, whether they sought medical care for these symptoms, and medical diagnoses provided. Information gleaned from the charts was used to establish if these diagnoses were made during the time period in which the child was being sexually abused.

The most commonly reported symptoms/signs were examined in relation to other factors. These factors included the type of genital contact reported; presence of genital injuries suggestive of sexual abuse (eg, genital abrasions, lacerations, and/or hymen transections); presence of STIs; perpetrator's age category; perpetrator's relationship to the girl; and the girl's age and sexual maturity (defined as reaching menarche) at the time of last contact with the perpetrator.

RESULTS

Of the 484 medical charts that met age and gender inclusion criteria, 161 cases met all study-inclusion criteria. Table 1 lists reasons for exclusion. Demographic variables were compared between study subjects and those who were excluded. Although the age range was the same for both groups, the mean and median ages of the girls in the study group were significantly higher than those of the girls in the excluded group (mean: 10.4 vs 7.4 years, respectively; median: 10.5 vs 6 years; $P < .05$). The study and excluded groups had similar racial and ethnic distributions: 63% vs 65% white, 30% vs 29% black, and 7% vs 5% other racial backgrounds, respectively. Twenty-five percent of girls in the study group were Hispanic compared with 19% of those in the excluded group.

Characteristics of the study population are listed in Table 2. Girls in this study reported experiencing differ-

TABLE 2 Characteristics of the Study Population, Expressed as Means or Medians for Continuous Variables and Frequencies for Categorical Variables

Characteristic	Summary Statistic
Age, y	
Mean (SD)	10.4 (3.9)
Median (range)	10.5 (3.1–17.8)
Gender, % female	100
Race, %	
White	63
Black	30
Other	7
Hispanic ethnicity	25
Type of inappropriate genital contact reported, %	
Digital-genital	72
Genital-genital	55
Oral-genital	31
Object-genital	2
Sexually abused >1 time	63
Same perpetrator	49
>1 perpetrator	14
Age at time of last contact with the perpetrator, mean (SD), y	9.6 (3.6)
Reached menarche by time of last contact with perpetrator(s), %	35
Time interval between the last perpetrator contact and sex abuse–specific medical examination, %	
Within 72 h	13
4 d to 1 mo	29
>1 mo but ≤1 y	32
>1 y	25
Symptoms reported after inappropriate genital contact, %	
Genital pain or soreness	53
Dysuria	37
Genital bleeding	11
Genital findings consistent with the history of sexual abuse, %	5
Diagnosed with a sexually transmitted disease, %	2

ent types of inappropriate genital contact, including contact with an object or the perpetrator's finger, mouth, and/or genitalia. Some girls reported only 1 type of contact; others disclosed multiple types. The most common types were digital-genital (116 girls [72.0%]) and genital-genital (88 girls [54.7%]) contact. Fifty (31.1%) girls reported oral-genital contact. Only 3 (1.9%) girls reported object-genital contact.

One hundred two (63.4%) girls reported multiple episodes of sexual abuse. Table 3 lists perpetrators' age categories and relationships to the victims. Twenty-two (13.7%) girls reported being touched by >1 perpetrator and, in all, 190 perpetrators were identified. As indicated in Table 3, 60% of the perpetrators were adults, and 40% were children or teens. One hundred eight (57%) perpetrators were related to the child; 91% were known to the child.

The mean age of the girls at the time of last perpetrator contact was 9.6 years (SD: 3.6 years). Fifty-six (35%) girls had reached menarche by the time of last perpetrator contact. A wide range of time intervals was reported

TABLE 3 Perpetrators According to Age Category and Relationship to Victims

Perpetrator's Relationship to Child According to Age Category ^a	No. (%) of Perpetrators (N = 188) ^b
Adults (N = 112 [60%])	
Family member	38 (20)
Step-family member	18 (10)
Mother's boyfriend	18 (10)
Family acquaintance	21 (11)
Total stranger	17 (9)
Children/teens (N = 76 [40%])	
Family member	43 (23)
Step-family member	9 (5)
Family acquaintance	9 (5)
Playmate or agemate	15 (8)

^a Definitions: child, <13 years old; teen, 13 to <18 years old; adult, ≥18 years old.

^b The age category of 2 perpetrators was unknown: 1 was a family member, and the other was a family acquaintance.

between last known perpetrator contact and the sex abuse–specific medical examination (Table 4).

Of 161 girls in the overall sample, 96 (59.6%) reported symptoms of genital pain, dysuria, and/or bleeding after inappropriate genital contact. Genital pain was the most commonly reported symptom (86 girls [53.4% of the total sample]), 60 (37.3%) girls reported dysuria, and 17 (10.6%) girls reported genital bleeding. Because these symptoms were not mutually exclusive, the total is >96.

In contrast to their daughters, parents/guardians reported knowing of significantly fewer urogenital symptoms. Only 28 (17.4%) parents reported knowing their daughters experienced genital pain ($\chi^2_1 = 84.0$; $P < .001$), 30 (18.6%) parents reported dysuria ($\chi^2_1 = 23.9$; $P < .001$), and 7 (4.3%) parents reported genital bleeding ($\chi^2_1 = 6.57$; $P < .05$). Thirty-eight (23.6%) parents sought medical help for their child's symptoms. Only 19 (11.8%) parents sought help during the time the child was being sexually abused, but 6 of them noticed their daughters' symptoms (genital redness, pain, bleeding, urinary frequency/urgency), asked about inappropriate touching, and, when verified, sought help. Of the remaining 13 girls, 5 were diagnosed with urinary tract infections, 1 with suspected sexual abuse, 2 with STIs, 1

TABLE 4 Number of Girls Reporting Different Time Intervals Between Last Perpetrator Contact and the Medical Examination for Suspected Sexual Abuse

Time Interval Between Last Contact With the Perpetrator	No. (%) of Girls (N = 158) ^a
Within 24 h	9 (6)
>24 h but ≤72 h	12 (8)
>72 h but <2 wk	20 (12)
2 wk to <1 mo	26 (16)
≥1 mo but <1 y	52 (32)
≥1 y	39 (24)

^a The time interval could not be ascertained for 3 girls.

TABLE 5 Urogenital Symptoms/Signs Reported Compared With Type of Genital Contact

Symptom Report	Genital-Genital Contact Reported	
	No (N = 73), n (%)	Yes (N = 88), n (%)
Dysuria		
No (N = 101)	55 (75.3)	46 (52.3)
Yes (N = 60)	18 (24.7)	42 (47.7)
Genital pain		
No (N = 75)	50 (68.5)	25 (28.4)
Yes (N = 86)	23 (31.5)	63 (71.6)

with yeast infection, and 1 with streptococcal vaginitis, and in 1 case no diagnosis was offered.

Eight girls (5% of the total cohort) had physical examination findings consistent with a history of sexual abuse at the time of the medical examination. All 8 girls had either healed or acute hymen transections. Additional findings included vaginal abrasions and genital warts (1 girl each). Of the 8 girls with transections, 6 of them reported genital bleeding; all 8 girls reported genital-genital contact. Three of 161 girls tested positive for STIs: 1 had gonorrhea and 2 had chlamydia. None of these girls were sexually active or had significant genital findings, although 1 had a history of vaginal discharge. Two of the 3 girls reported dysuria and genital pain related to the inappropriate genital contact.

Several significant associations between type of genital contact and reported symptoms/signs were noted, especially when genital-genital contact occurred; therefore, we compared symptoms and signs reported by girls who experienced at least 1 instance of genital-genital contact with those who did not, although they may have experienced other types of genital contact (digital-genital, oral-genital, or object-genital). Dysuria after genital-genital contact was reported by 42 (47.7%) girls compared with 18 (24.7%) girls who reported no genital-genital contact ($\chi^2_1 = 9.08$; $P < .003$). Similarly, genital pain/soreness after genital-genital contact was reported by 63 (71.6%) girls compared with 23 (31.5%) girls who reported no genital-genital contact ($\chi^2_1 = 25.8$; $P < .0005$) (see Table 5). Genital bleeding was infrequently reported by both girls in both groups, but 14 (16%) girls noticed genital bleeding after genital-genital contact compared with 3 (4%) girls who reported no genital-genital contact.

Analyses also indicated that age at last perpetrator contact was significantly associated with type of contact ($t_{156} = 5.26$; $P < .001$), with the mean age of the genital-contact group (10.9 years) being older than the no-genital-contact group (8.1 years).

The relationships between symptom reports and other study variables were also examined. The time interval between the last reported perpetrator contact and the medical examination did not significantly affect the number or types of symptoms/signs reported. The girl's age at last perpetrator contact was marginally related to reports of dysuria ($t_{156} = 1.78$; $P < .08$), with the mean age of those who reported dysuria (10.3 years) being

TABLE 6 Results of 2-Step Logistic Regression Analyses Examining the Relationship of the Presence of Genital-Genital Contact and Symptom Reporting, While Controlling for Age

Symptoms	B	SE	Wald	df	Significance	Odds Ratio
Dysuria	0.908	0.373	5.93	1	.015	2.48
Genital pain	1.843	0.387	22.71	1	.001	6.32

older than those who did not (9.3 years). Likewise, the mean age at last perpetrator contact of those who reported genital pain (10.1 years) was older than that of the girls who did not (9.2 years), but this was not statistically significant ($t_{156} = 1.63$; $P < .11$). Reaching menarche by the time of last perpetrator contact did not significantly affect symptom/sign reporting. The perpetrator's age category (child, teenager, adult) had no significant association with reports of either dysuria or genital pain, even when a cohort of girls <13 years old at the time of last perpetrator contact was examined separately.

As a whole, these results indicate that one of the strongest predictors of symptom reporting is the type of genital contact the girl experienced during the abuse. Age at last perpetrator contact was marginally associated with one type of symptom report and strongly associated with an increased likelihood of genital-genital contact; therefore, we reanalyzed the effect of contact type on symptom reporting while controlling for age. Using 2 logistic regressions, 1 for each reported symptom, girl's age at last perpetrator contact was entered on the first step, and a dichotomous variable representing the presence of genital-genital contact was entered on the second step. In both analyses, the relationship between the presence of genital-genital contact and symptom reporting persisted even when controlling for age. Girls who experienced genital-genital contact had twice the odds of reporting dysuria and 6 times the odds of reporting genital pain compared with girls who did not experience genital-genital contact (Table 6).

DISCUSSION

This retrospective study was designed to describe symptoms and signs related to genital contact as reported by girls who were evaluated for possible sexual abuse. To our knowledge, no other studies have been published that describe this, although histories provided by sexually abused children, in the absence of physical findings, can be crucial for the diagnosis of sexual abuse. We found that at least 1 urogenital symptom/sign was reported by ~60% of the girls in our study population. More than half reported genital pain, more than one third reported dysuria, and one tenth reported genital bleeding.

Girls in this population most commonly experienced digital-genital and genital-genital contact, and many girls were exposed to multiple types of genital contact. Two thirds of the girls were sexually abused more than once, most often by the same perpetrator. Similar to

others, we observed that the girls' families knew >90% of the alleged perpetrators⁷ and that a significant proportion of the identified offenders were older peers.⁸

Because it is known that many adult perpetrators of young children gradually introduce sexually inappropriate activities to them,^{9,10} we anticipated that young girls with adult perpetrators would report fewer symptoms/signs. When symptom/sign reporting by a cohort of girls <13 years old was examined separately, statistically significant differences were not observed between the girls who had adult perpetrators compared with girls who had child/teen perpetrators. It is possible that selection bias limited our ability to detect a difference, because many medical charts of 3- and 4-year-old girls were excluded because they lacked expressive capabilities to permit disclosure of historical details about sexually inappropriate activities. Also, gradual introduction of sexually inappropriate activities may make young children less apt to report these activities, because they may think it is normal for adults to touch their genitals.

We questioned whether a larger proportion of young, physically less mature girls might report more symptoms/signs related to genital contact because, clinically, genital tissues in prepubertal girls are very sensitive to touch. It is surprising that there were no statistically significant differences in girls' ages and sexual maturity at the time of last perpetrator contact compared with the number or type of symptoms reported. While exploring this association, we noted that greater proportions of older and sexually mature girls reported genital pain and bleeding. A greater proportion of older girls also reported genital-genital contact. We observed that genital-genital contact was highly associated with reports of urogenital symptoms/signs. When all these factors were analyzed together, the most statistically significant factor associated with symptom/sign reporting was genital-genital contact. This result makes sense, because a perpetrator using a finger to touch a girl's genitalia may be more cognizant of the amount of pressure being applied and more attuned to the girl's discomfort than would occur with genital-genital contact.

Similar to others, we observed that girls frequently wait to disclose inappropriate sexual experiences,¹¹ but we learned that different time intervals between last perpetrator contact and the medical examination did not affect the number or type of urogenital symptoms/signs reported.

Although the medical literature lacks studies about the frequency and type of urogenital symptoms/signs experienced by sexually abused girls who have reported direct genital contact, 1 study prospectively examined urogenital symptoms/signs reported by the parents of children >2 years old after direct genital contact by catheterization for radiology procedures. One third of the parents reported that their child developed dysuria, and <5% reported that their child developed hematuria.¹² Because investigators asked the child's parents, not the child, about urogenital symptoms/signs ≥ 4 days after the procedure, some symptoms, such as genital pain, may not have been reported. Nevertheless, their findings are similar to ours, because slightly more than one third

of the girls in our study reported dysuria and one tenth reported seeing blood in the genital area after inappropriate genital contact.

In our study, parents reported urogenital symptoms/signs at half the rate as their children, but when girls were given the opportunity to report about these, 60% reported ≥ 1 symptom/sign after inappropriate genital contact. Because symptoms/signs are related to activities veiled in secrecy and do not persist for long periods of time, sexually abused girls may fail to mention them to parents or their doctors during routine history taking. Once a girl discloses that she was sexually abused, she is free to talk about what happened and how she felt when genital contact occurred. This may explain why more urogenital symptoms/signs were reported here.

In the cases reviewed, we explored other diagnoses that were offered to explain urogenital symptoms/signs. Similar to Klevan and DeJong,¹³ we found that urinary tract infections are uncommon explanations for urogenital symptoms/signs in sexually abused children. We also found that only a small proportion of the girls in this study exhibited genital findings consistent with the history of sexual abuse or tested positive for STIs.¹⁴⁻¹⁸ These girls and many more reported experiencing genital pain, dysuria, and/or genital bleeding associated with inappropriate genital contact. Dysuria is a symptom of genital irritation.^{19,20} Genital pain and bleeding have been associated with genital trauma.¹⁴ When these symptoms/signs are temporally related to inappropriate genital contact in the absence of alternative explanations, these historical details serve to support the child's allegations that the contact occurred. These injuries are usually superficial and heal without diagnostic residual findings, because the healing of genital injuries, in most cases, is rapid and complete.^{14-17,21}

We recognize that selection bias was introduced, because we chose to use cases from a single, albeit expert, physician. In addition, we relied on the girls' abilities to provide details of the abusive event and describe urogenital symptoms, which led to exclusion of many records of young girls. Consequently, these results may not generalize to other populations.

CONCLUSIONS

As far as we are aware, the information described here has not been reported previously. Knowing the frequency and type of urogenital symptoms/signs that occur in sexually abused girls may help others plan prospective controlled studies to further investigate symptoms and signs in this group compared with the general population.

Sexually abused girls who experienced direct genital contact frequently reported urogenital symptoms related to the abusive episodes. These symptoms were reported most frequently when girls experienced genital-genital contact. For medical professionals caring for sexually abused girls, this information highlights the prevalence of urogenital symptom/sign complaints and clarifies injury mechanisms associated with symptom and sign reporting in this population. This study further demonstrates the importance of obtaining complete medical

histories, thorough reviews of systems for preexisting conditions, and integrating and interpreting this information in light of thorough physical examination findings.

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