Child sexual abuse—the interface with genitourinary medicine

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Abstract
Whenever a child is seen in a genitourinary clinic the possibility that the child is the victim of child sexual abuse must be considered. This article considers the definition and postulated prevalence of child sexual abuse in England and Wales. A proposed management plan is then detailed with a review of the significance of the medical findings. Finally consideration is given to the ethical dilemmas which such cases pose.

(Keywords: Sexual abuse; Children)

Introduction
Child sexual abuse has been succinctly defined as any use of children for the sexual gratification of adults. Sexual abuse embodies a broad range of activities including the taking of indecent photographs of children, an adult inciting a child under the age of 14 years to touch an adult's genitals, rape and buggery. The vast majority of the offences committed against children leave no physical scars but any of them may leave severe psychological problems.

Despite research and data collection in many of the developed countries there is still no definitive information on the prevalence of child sexual abuse throughout the world. Of the published data that is available the variations in the methodology make direct comparisons impossible. For example during 1992 the reported incidence of child sexual abuse in the United States of America was nearly half a million, which equated to 0.7% of the child population. This was higher than the reported incidence in the United Kingdom (0.37%) and Oslo, Norway (0.22%) during the same year. However, the United States figures relate to both substantiated and unsubstantiated cases whereas the United Kingdom figures only relate to the former.

Whilst precise figures may be essential to the policy makers they have little relevance to the individual physician dealing with a child who may have been abused. It is sufficient that the medical profession has acknowledged that child sexual abuse is a widespread problem; it is therefore the duty of every physician who has professional contact with children to consider sexual abuse on his/her list of differential diagnoses.

A sexually abused child may present to a genitourinary physician overtly or covertly with symptoms or signs which have caused the child or carer concern. This article considers the postulated prevalence of child sexual abuse in England and Wales, clinical manifestations of sexual abuse, the management of these complex cases and some ethical dilemmas.

The extent of the problem in England and Wales
The final report of The National Society for the Prevention of Cruelty to Children (NSPCC) gives estimated figures for the national (UK) incidence of sexual abuse based on extrapolations of the number of children placed on the registers managed by the NSPCC in the years 1988, 1989 and 1990. The report divides the figures into three age groups 0–4, 0–14 and 0–16 years (table 1).

The NSPCC no longer collates this information but the Department of Health continues to publish the information accumulated from Child Protection Registers in an annual report. In England children's names are placed on the Child Protection Register if following a multi-agency case conference they are believed to have been abused or at risk of abuse and are therefore to be the subject of an inter-agency plan to protect them. During 1991, 3900 children were recorded on a child protection register in the sexual abuse category (these figures included mixed abuse in which sexual abuse was considered to be the main concern). The sexual abuse category registrations increased to 4200 cases during 1992. According to the Department of Health's figures the overall rate for "sexual abuse" in 1992 was 0.6 per 1000 girls and 0.2 per 1000 boys in the population. During 1992 this category accounted for 24% of registrations for girls and 11% of registrations for boys. The registrations under sexual abuse increased substantially with age for girls to peak at the 10–15 age group; the variation between age groups for boys was slight and peaked at 5–9 years.

Table 1 Estimates of the national incidence per year in England and Wales (rounded to nearest 100)

<table>
<thead>
<tr>
<th>Age (year)</th>
<th>Estimated number of children</th>
</tr>
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<tbody>
<tr>
<td>0–4</td>
<td>1,500</td>
</tr>
<tr>
<td>0–14</td>
<td>5,300</td>
</tr>
<tr>
<td>0–16</td>
<td>6,200</td>
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In England and Wales more local perspectives regarding the prevalence of child sexual abuse are provided by individual police reports. The 1992 Metropolitan Police Service report to the Commissioner states that during 1991 the 26 Metropolitan Police Child Protection teams dealt with 4925 allegations or suspicions of child sexual abuse; the Greater Manchester Police, working in another large urban area, were involved with 1031 cases during the same year. Of the Manchester victims 76% were female and 96.5% of the alleged perpetrators were male. Stranger abuse accounted for only 4% of the Manchester cases. Unfortunately these reports do not detail how many of these suspicions were justified. Although spontaneous statements from children should usually be believed a percentage of allegations are made maliciously by adults involved in intrafamily conflict. The latter is by professional carers is increasingly being recognised but false allegations by mentally traumatised children in care also occur.

For every reported allegation or suspicion of child sexual abuse there are likely to be many more undisclosed cases. Surveys of the adult population produce variable results depending on the wording of the questions and all rely on the recall of the adult. In England and Wales the present age of consent for heterosexual intercourse is 16 years and homosexual intercourse is 21 years. The latter is, however, recognised that a large number of males and females below the age of 16 years are participating in sexual intercourse in spite of the law regarding the age of consent. A survey of 3777 young people in the South West of England found that 41% had become sexually active before the age of 16 (46% of males; 38% of females). There will be a percentage of these adolescents who have not consented to this activity and are victims of child sexual abuse.

Leicester genitourinary clinic reported seeing 183 children during a 3 year period. The possibility of rape or sexual abuse was alleged in only 29 of these (15.5% of the total number of children). In the remaining 154 children sexual abuse appears to have been excluded although the authors do not detail how this was ensured.

Medical assessment in child sexual abuse
There are several reasons why a comprehensive medical assessment should be undertaken in cases of alleged sexual abuse or when the possibility has not been excluded.

1. The examiner must look for changes in the physical health of the child which may arise as the result of sexual abuse: pregnancy, injuries and sexually transmitted diseases.
2. Having excluded physical problems the examiner must be in a position to reassure the child and family regarding the child’s health. Many teenagers disclose abuse following sex education classes because of fears of pregnancy or AIDS.
3. The possibility of psychological harm should be addressed and appropriate referrals made.
4. The physician must be able to identify and interpret any physical signs for use in legal proceedings, be prepared to write prompt reports and statements, attend case conferences and be qualified to give evidence in court.

The Working Party on Physical Signs of Sexual Abuse in Children recognised the complexity of such evaluations and recommended the development of a high level of skill by a small number of doctors in each district. Joint examinations between professionals of different disciplines (police surgeon/genitourinary physician, genitourinary physician/paediatrician) are to be encouraged and can be of considerable benefit to the child. The assessment should be conducted at a time and in an environment suitable for the child. Children should be given the opportunity to express a preferred gender for the examining physician.

Consent for the examination
Although in the Children Act, 1989 a child is defined as a person who has not yet reached 18 years of age, the Family Law Reform Act, 1991 allowed for a child to be 16 years of age (who is presumed to be able to understand the issues) to consent to surgical, medical and dental treatment. Below 16 years, a child is still able to consent if deemed by the doctor to be of sufficient maturity and understanding to appreciate what is involved, that is, “Gillick competent”. In examinations for forensic purposes, it is advisable to have the consent from the adult holding Parental Responsibility for that child as it would be difficult to ensure the child fully understood the possible consequences of an examination for sexual abuse, for instance that a close relative could be imprisoned.

The Children Act allows a child to refuse a medical assessment or examination and in a Gillick competent child only the high court can overrule this.

History of the allegation
The physician should obtain details of the allegation from accompanying social worker, police officer or carer. The child of sufficient maturity can be asked non-directive questions such as “Can you tell me what has been happening to you? “Do you know why you have come to the doctor today?’. The child should not be questioned at length about the abuse. Retelling of events may be stressful for the child and the child’s evidence may be unacceptable in court if there is any possibility that leading questions (which suggest the answer) have been utilised. Therefore it is vital to record both the questions and the answers verbatim in the notes. In some proceedings children’s evidence is excluded from the
normal rules of hearsay, allowing statements made by children to professionals to be given in court by that professional.\textsuperscript{30}

It must be remembered when detailing the allegation that girls who have never used tampons and have no sexual experience may be unsure as to what constitutes vaginal penetration. They may genuinely believe that full penetration has taken place when the tissues inside the labia majora were touched and discomfort was experienced. One author puts an age limit to this naivety\textsuperscript{31}; perhaps rather it should relate to the child’s sexual knowledge and experience.

\textbf{Medical history}

Having recorded all the salient personal details the physician must obtain a comprehensive medical history. This serves several purposes, not least it assures the child and family that the doctor has a genuine concern for the whole child. There are some medical conditions which, if not elucidated, may lead to misinterpretation of physical findings\textsuperscript{32}; eczema and allergies\textsuperscript{33} can lead to perianal erythema and skin fissures, constipation and diarrhoea are common causes of anal fissures\textsuperscript{34} and trauma or medical intervention may distort the clinical findings.\textsuperscript{35} With female adolescents the physician must record the date of the menarche and note whether this preceded the alleged incident(s). At puberty oestrogen causes the hymen to hypertrophy concealing the effects of trauma.\textsuperscript{36} Whether tampons have ever been used should be noted although current opinion is that their use causes no more than stretching of the hymen.\textsuperscript{37}

Direct questioning should be used to detect behaviour and symptoms which have been associated with child sexual abuse. The list of the former is lengthy and includes secondary nocturnal enuresis, encopresis, nightmares, insomnia and sexualised behaviour.\textsuperscript{38} Masturbation is normal behaviour in young children and adolescents; however, it is generally believed children are unlikely to damage themselves by self-manipulation.\textsuperscript{39} Foreign bodies may be placed in the vagina, particularly by the young and those with learning disabilities, leading to bleeding or a discharge.\textsuperscript{40} Other physical indicators include non-menstrual bleeding, dysuria, urinary frequency and symptoms of sexually transmitted diseases.\textsuperscript{41}

Children should be specifically asked about previous sexual activity; some may be inhibited from answering truthfully in the presence of adults or parents and therefore every child must be given the opportunity for a private consultation.

Taking these details allows the doctor to become familiar with the vocabulary of the child and the doctor can then use the terms familiar to the child during the examination.\textsuperscript{42}

\textbf{Examination}

It cannot be emphasised enough that a significant number of children examined because of suspected sexual abuse have no physical signs. The reasons for this include the non-traumatic nature of much sexual abuse and the frequent delay between the abuse and the disclosure.\textsuperscript{42}

No examination should be undertaken until the need for the collection of forensic evidence has been excluded (see below).

\textit{General examination} Just as a detailed history is taken so must a complete medical examination be undertaken. During the examination the doctor is specifically seeking signs of disease which may cause misinterpretation of the genital findings such as eczema, allergies and lichen sclerosis.\textsuperscript{43} There may be physical injuries present as a result of the sexual abuse; “finger tip” bruises where a child has been held (fig 1), bites—both sexual and aggressive (fig 2) and other signs of violence, although these are unusual.\textsuperscript{44} Non-accidental injury must be considered; it was associated with child sexual abuse in 1% of the NSPCC cases registered in 1990.\textsuperscript{4} There is an

\textbf{Figure 1} “Finger tip” bruises where the upper arm has been gripped.

\textbf{Figure 2} Bite mark on the abdomen. The impressions from the teeth are seen as two opposing arches. Sucking of the skin into the mouth results in a central area of erythema and petechial bruising; this is commonly associated with sexual assaults.
increased incidence of self-inflicted injury amongst sexually abused children due to guilt and low self esteem. These include incised wounds, typically on the wrists, and burns from cigarettes.44 The doctor should therefore note any injury to the scar and record the child or carer’s explanation for that injury.

Genital examination Colposcopes are not routinely used for genital inspection in England despite their popularity in America and Australia. Their great advantage is that standard photographs incorporating a scale can be taken and used as evidence, for second opinions without the need to re-examine the child, and for peer review.45

Female The medical examination must be tailored to the individual case and carried out sensitively with consideration for the wishes and feelings of the child.

With the child lying frog-legged on a couch, or in the case of a small child gently but firmly held on the carer’s knee, the genital and anal areas should be carefully inspected using a magnifying light. The appearance of the genitalia as first seen should be recorded. Gentle pressure and traction lateral to the labia majora will then reveal the labia minora and the hymen. By varying the pressure on each side a clear view of the hymenal edge can usually be obtained. If it is not possible to see the hymenal edge clearly then a small glass probe or a moistened swab may be used to display it to ensure that there are no tears or scars.

In the young child where there is no allegation of vaginal penetration, no further examination may be necessary; it is important not to make the examination more intrusive than the alleged offence. In older children where full sexual intercourse is alleged, the examination should include an assessment of the vagina.

There may be signs of infection, such as herpetic lesions, on the external genitalia. Flatting of the labia minora has been associated with rubbing of the penis on the outside of the labia, but it is also recognised that this is a normal finding.49 As the labia majora are parted the labia minora come into view. Following a recent sexual assault these may show abrasions, bruises, lacerations or even incised wounds if a sharp object (including finger nail) has been used during the abuse. Lacerations are most common at the posterior fourchette due to its fragile nature.47 The skin of the introitus, particularly the fossa navicularis, may also show bruises, abrasions and lacerations. The majority of these injuries will heal rapidly, often without trace.48 Some breaches in the epithelium may heal by secondary intention, leaving scars the colour of which will depend on the age of the injury. White lines in the midline of the fossa navicularis, which have been mistaken for scars, are now recognised as being a normal congenital finding.49

The hymen is an area of such natural variation that some physicians in America are known colloquially as “hymenologists”. The main difficulty arises because of lack of clinical experience, in that it is only recently that doctors have started to examine this area in any detail.15 Hymens may be crescentic, annular, fimbriated, septate, cribiform or imperforate.49 There appears to be no such thing as a congenitally present hymen.51 Due to the effects of maternal oestrogens hymens in children under 3 years of age are often elastic and fimbriated, making assessment for injury difficult. Similarly post-pubertal females frequently have fimbriated hymens. It is important not to confuse a natural fimbriation for a tear22 but the distinction may be impossible; sometimes the latter will show scarring at the base.

When a child is examined immediately following penetration, or attempted penetration, of the vagina fresh hymenal injuries may be noted; these could include bruises, lacerations and abrasions. If the hymen is transected it usually occurs along the posterior rim, between 3 o’clock and 9 o’clock; initially an inverted “V” shaped cleft is created. If the examination of the child is delayed the sharp edges of the transection may become rounded leaving only a narrow rim of hymenal tissue along the posterior margin.50 Attenuation of the posterior rim of the hymen is also associated with chronic abuse.

In the past decade there has been much discussion about the significance of the diameter of the hymenal opening, causing one American author to write a commentary entitled “Predictive accuracy of sexual abuse: a big issue about a little tissue.”514 Such discussions must be kept in context; the hymenal opening can vary in dimensions from day to day and even during the same examination due to its elasticity. When present, the natural fimbriations also allow distension with little damage. It is difficult to measure a recessed structure even with the aid of standardised glass probes (Glaister’s globes). The Royal College of Physicians report advises that a measurement of greater than 1·5 centimetres in association with other evidence of trauma would be supportive but not diagnostic of abuse.24 The average diameter of an erect adult male penis has been put at 3·5 centimetres (cm)59 and the adult index finger measures approximately 1·5 cm.39

Vaginal injuries may be present and will generally be symptomatic; producing pain or unidentified bleeding. Extensive vulval and vaginal injuries requiring repair may be produced by consensual sexual intercourse.26 In the post-pubertal female where full sexual intercourse is alleged, the vagina should be assessed for retentibility and loss of centerline both associated with repeated acts of vaginal penetration.31 38 In the pre-pubertal child the significance of finding a smooth vagina is contentious; unosexenogenised vaginal tissues have been reported as being naturally smooth.57 It must be stated that because of physical and ethical difficulties there is a dearth of anecdotal information on the state of the vagina in children who are not victims of sexual abuse.

Sometimes the physician will be asked
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whether an adolescent is a "virgin". Not infrequently it is impossible to tell.5 Cases have been reported of normal or non-specific genital findings where the perpetrator has confessed to vaginal penetration.5

**Male** There may be minor injuries of the penis, including tears of the foreskin frenulum, bites and bruises following sexual abuse. The majority of these injuries heal with no trace.51

**Anal examination** Children of both sexes may be anally abused,52 though in our experience females are usually genitally abused as well. The anus is naturally distensible accommodating the passage of large stools without damage.5

The following have all been associated with buggery:42 fissures, erythema, scars, swelling, bruising, venous congestion, sphincter laxity, reflex anal dilatation, skin thickening, loss of normal anal verge skin folds. None of these findings is pathognomonic of anal penetration, nor does the absence of anal findings mean that a child has not been abused.4250 In most cases, even where buggery is long standing, there will be no conclusive medical evidence.

**Medical care**

The care of the child is paramount. Disease and pregnancy must be prevented by the appropriate management and treatment (post-coital contraception, prophylactic antibiotics). Screening for sexually transmitted diseases should ideally be conducted 10 to 21 days following the last alleged incident to allow for incubation of infections. It is not possible or appropriate to screen every child suspected of having been sexually abused; the decision must be made on the history of the assault. Children in whom there is a clear history of genital-genital contact, those who are unable to give a history or those who are symptomatic should be screened for sexually transmitted diseases until further knowledge allows more selectivity. It will not always be possible to obtain the swabs one would normally hope for when screening adults; a small hymenal opening will certainly preclude the passage of a speculum and even the passage of a nasal swab may cause discomfort; a vulval and extra-genital swabs must then suffice. Previous articles in this series have considered the significance of genital infections in depth.80

Referral to a psychiatrist or psychologist may be necessary to prevent or treat post traumatic stress disorder.

**Table 2 Time limits for the detection of spermatozoa and seminal fluid**

<table>
<thead>
<tr>
<th>Location</th>
<th>Spermatozoa</th>
<th>Seminal fluid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vagina</td>
<td>6 days</td>
<td>12-18 hours</td>
</tr>
<tr>
<td>Anus</td>
<td>3 days</td>
<td>3 hours</td>
</tr>
<tr>
<td>Mouth</td>
<td>12-14 hours</td>
<td></td>
</tr>
<tr>
<td>Clothing/bedding</td>
<td>Until washed</td>
<td></td>
</tr>
</tbody>
</table>

**Forensic samples**

Only the presence of sperm or a pregnancy can confirm sexual activity. The detection of semen, hairs, lubricants, saliva, blood or other body fluids at a scene, on clothing or on a child, when identified, will not only corroborate a child's story but may lead to the identification of alleged assailants by conventional or DNA grouping. Table 2 shows the time limits for the detection of spermatozoa and seminal fluid.6162 Any part of the body suspected of being contaminated by fluids or materials should be swabbed and foreign materials collected. These samples must be sealed and labelled. The packaging must be in accordance with the Criminal Justice Act.24 No physician should undertake to obtain these exhibits without the necessary training.6364

**Ethical dilemmas**

The interface between medicine and law is a complex area. Child sexual abuse is a crime but doctors are often confused about disclosure of information to investigating authorities. As the General Medical Council states "Patients are entitled to expect that information about themselves will remain confidential." When discussing disclosures without the consent of the patient the G.M.C. advises "Deciding whether or not to disclose information is particularly difficult where a patient cannot be judged capable of giving or withholding consent to disclosure. One such situation may arise where a doctor believes that a patient may be the victim of physical or sexual abuse. In such circumstances the patient's medical interests are paramount and may require the doctor to disclose information to an appropriate person or authority".66 This paragraph is open to interpretation. Therefore, before confidentiality is breached, the advice of enquiries colleagues and one's defence society should be sought.

A dilemma specific to genitourinary physicians is the disclosure to a court of the results of tests for infection, particularly if the tests have been obtained immediately following the assault and could not relate to it. Some clinics have adopted procedures whereby the doctor examining for evidence of the assault is not the same as the doctor who screens for and treats infection; whether the court will accept this distinction has yet to be seen.

HIV antibody tests are only performed with the knowledge and consent of the adult patient who has been fully counselled as to the implications such testing. Children will rarely have the ability to comprehend the ramifications of HIV testing and it is therefore dependent on the doctor to consider the degree of risk to which the child has been exposed and, after full discussion with any carers, to act in the child's best interest based on the risk assessment.

**Conclusion**

Child sexual abuse must be acknowledged by the professions involved with the care of
children and the public as a significant detriment to the health and well-being of the vulnerable. We have a duty to suspect, diagnose and treat the consequences of child sexual abuse in order to diminish the long term consequences. Many genitourinary clinics have policies whereby all under 16 year olds are seen by a senior doctor and a counsellor such as health advisor which may facilitate the detection of covert child sexual abuse. United Kingdom physicians must stop ruminating over Cleveland and must follow the lead of The United States of America by developing peer review and nation-wide audit meetings for all doctors who examine sexually abused children.

3 Indecency with Children Act 1960.
4 Sexual Offences (Amendment) Act 1975.
5 Sexual Offences Act 1956.
27 Children Act 1989.
63 Dean P. At last—a training for police surgeons. GP 10 July 1987:33.
67 Arnold RP, Rogers D, Cook DA. Medical problems of adults who were sexually abused in childhood. BMJ 1990;306:705–6.