Human immunodeficiency virus infection and child sexual abuse

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Child sexual abuse (CSA) has not previously been regarded as important in the overall transmission of HIV infection to children.[1,2] However, with both CSA[3,4] and HIV infection on the increase, the risk of acquiring HIV infection through CSA is real, and several reports of such transmission have been documented.[5,6] The incidence in children of HIV acquired by CSA is unknown, but the prevalence in Africa among sexually abused children, mainly with penetrative injuries, ranges from 1% (2/200 children) in Cape Town, South Africa, to as high as 33.8% (24/71 children) in Cameroon.[5,7] The author has experience of at least 10 children who became HIV-infected almost certainly through sexual abuse over the past 10 years.

Risk of HIV transmission by sexual abuse

The risk of transmission during sexual abuse depends on factors such as the HIV status of the perpetrator (mostly unknown by the investigating team) and the child (although an already infected child may be reinfected), the extent of penetration and mucosal injury that occurs in the penetrated orifice (vaginal, anal or oral), the presence of other sexually transmitted infections (STIs), whether the perpetrator ejaculated during the incident(s), and the number of exposures to abuse.

In adult women, the risk of transmission from one episode of vaginal-penile contact is 0.1 - 0.2%, while the risk for transmission during adult penile-anal contact is estimated at 0.1 - 3.0%.[8] The risk of oral-genital contact is not known. In the case of CSA the risk of transmission of HIV during a single episode of abuse is unknown,[8] but because of greater risk of mucosal trauma, the risk is likely to be higher than in consensual adult sexual contact.

In a survey of children attending the Family Clinic for HIV at Tygerberg Academic Hospital between 1997 and 2001, 5 of 274 children (1.8%) were infected through CSA (M F Cotton — personal communication). Between 20% and 30% of infants born to HIV-infected mothers become infected in the absence of intervention. Should these children be victims of CSA it will be difficult to establish whether HIV infection was vertically transmitted or acquired by CSA if they had not been tested previously. Molecular investigations such as phylogenetic analyses have been used in some cases of suspected transmission by CSA or other forms of unlikely transmission, but this is expensive, not freely available, and difficult to interpret because of rapid and continuous changes in the virus.[9,10]

Screening for HIV in sexually abused children

HIV counselling should be an integral part of the assessment of all children who have suffered sexual abuse, if not for screening, then at least to allay fears about HIV infection. In itself CSA causes physical and/or psychological trauma and children are often stigmatised. A possible further diagnosis of HIV infection, whether sexually or otherwise acquired, will certainly add to the trauma and stigmatisation experienced by the individual and the family. Caregivers or young people will have questions regarding HIV after CSA, and these should be carefully considered and dealt with sensitively and without delay. All staff working with children who have suffered CSA should therefore have a basic knowledge about HIV infection, HIV post-exposure prophylaxis (PEP) and HIV care resources.

In sub-Saharan Africa, where the prevalence of HIV infection is high, the need for testing will generally be greater than in countries with a lower HIV prevalence. A careful history may reveal potential risk factors regarding the abuse and the abuser which might make testing more pertinent.[2]

Screening policies for HIV testing among sexually abused children have varied from recommendations for selective testing to recommendations for universal testing.[6] Selective recommendations seem to be more widely accepted.

Table I summarises the circumstances in which HIV serological testing in CSA have been recommended.[1,2,6]

HIV testing and informed consent

All parents/guardians of children under the age of 14 years, and adolescents above 14 years of age with or without their parents' consent, presenting to a health facility after being sexually abused should be counselled by the examining health worker about the potential risk of HIV transmission. If the child presents within 72 hours of being sexually abused, antiretroviral drugs should be offered to prevent HIV transmission.

The following points should be covered in the counselling:

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1. The risk of transmission through CSA is not known (see above).

2. There is strong evidence to support the use of PEP in preventing HIV transmission in occupational exposure.[11-13] Although the effectiveness of PEP in non-occupational exposure such as sexual abuse cases is not known, it is now widely accepted on the basis of successes with occupational PEP.[11,14,15] However, HIV PEP is not a cure for HIV infection.

3. Acceptance of HIV PEP is voluntary. Acceptance of HIV PEP requires the patient and/or caregiver to commit to completing a 28-day regimen and a follow-up programme. The importance of compliance should be emphasised.

4. The common adverse events of the drugs used should be explained. Most adverse events are manageable, but rarely these may be severe. Decisions to provide HIV PEP must balance the potential benefits and risks.[14,16] The adverse events of antiretroviral drugs may be aggravated when taken with other medication such as antituberculosis agents.

5. If parents/guardians request antiretroviral prophylaxis more than 72 hours after sexual abuse, it should be explained that this will have no impact on preventing HIV transmission.

Screening for CSA in HIV-infected children

Health care workers should consider CSA as a possible reason for acquisition of HIV infection especially in older children diagnosed with HIV or in those whose mothers are HIV-negative.[6,17] In our experience most children do not readily disclose that they have been sexually abused for a variety of reasons. Several of our children have been identified as having been sexually abused only after presenting with HIV infection and its related complications. Others were seen as acute CSA cases and initial HIV serological testing was done and found to be negative, but no follow-up was arranged and they returned years later with clinically evident HIV infection with no other subsequent risk factors for transmission.

Testing of the perpetrator of CSA

Testing the alleged perpetrator is fraught with legal and ethical issues regarding the rights and confidentiality of the individual. Currently it seems that the HIV status of the alleged perpetrator of CSA can only be tested if s/he is willing to be tested, even if under arrest. The police cannot order a health care worker to perform an HIV test unless the arrested person consents. If the HIV status of the alleged perpetrator is known to a doctor, the latter should be informed of the situation and s/he may then ask the alleged perpetrator if this information could be disclosed to the person managing the child victim. If the perpetrator refuses, confidentiality can be breached. The doctor should, however, first inform the perpetrator that confidentiality is going to be breached in the best interests of the child victim's health.

Prevention of HIV infection through CSA

HIV post-exposure prophylaxis regimens

Zidovudine (AZT) and lamivudine (3TC) are currently included in most HIV PEP regimens because of their demonstrated reduction in HIV transmission in occupational exposures and because they are generally well tolerated by patients.[11,18] With the roll-out of antiretroviral therapy in South Africa, possible development of drug resistance should be taken into account as in other countries, and some authors advise substituting other nucleotide reverse transcriptase inhibitors (NRTIs) for AZT and 3TC if it is known that the source case has been taking these agents.[19]

Twice-daily regimens should be used where possible, and HIV PEP should be administered as soon as possible (within hours) after the abuse. Health care workers should not wait for HIV test results before starting PEP if there is an indication for its use. If the child is already known to be HIV-infected PEP should not be given, but the child should be referred to an appropriate HIV clinic for further management. If the initial HIV test is positive, or by further evaluation of the case it becomes clear that PEP is not indicated, prophylaxis can be discontinued. Prophylaxis is also not indicated if the child presents more than 72 hours after the incident.

Although some authors recommend a two-drug regimen (AZT plus 3TC) as HIV PEP in some circumstances, most guidelines recommend a three-drug regimen (two NRTIs plus a protease inhibitor).[11,14,18] Protease inhibitors are the main item of controversy in HIV PEP regimens because they are more expensive, have more unpleasant adverse events, and their benefit in PEP has not yet been established.[11] Drugs and doses are summarised in Table II.

Children and adolescents started on HIV PEP should receive sufficient medication for 3 - 7 days and be seen for follow-up within this period to assess adherence and tolerance of the regimen. If the regimen is tolerated and they are adherent to therapy, the rest of the 28-day PEP course should be supplied.

Follow-up HIV testing

All sexually abused children should be followed up in a health care setting where appropriate medical and counselling resources are available. In those who are at risk for HIV transmission serological testing should be performed at 4 - 6 weeks, and at 3 and 6 months after exposure. In our experience both compliance with prophylaxis regimens and follow-up

remain major problems in the effective management of these children.

Prevention of CSA

A clear message should be proclaimed by all political and community leaders that CSA is unacceptable and inexcusable. More effective medical examinations, police and social work investigations and successful prosecutions with the appropriate punishments could deter many male perpetrators from CSA.[20] Myths regarding the cure of STDs and particularly HIV by having sex with a virgin, a mistaken belief still held by many, must be opposed vigorously.[21,22] More complex, but no less important in curbing CSA, are issues of gender inequality with women and children being the victims, extreme levels of poverty, and disruption of families.

Disclosure of diagnosis to an HIV-infected child

There is an understandable fear among parents of disclosing the HIV status to their children in the case of vertically transmitted HIV, as the disease is still very much stigmatised and parents fear that children will reveal their status to their friends and in this way to the community.[23] According to reports mainly from Western countries, the majority of parents reveal the status to their children from about 8 - 10 years of age.[24]

Children infected with HIV through CSA are generally older and mothers are mainly HIV-negative.[6] Disclosure to these children could be as difficult even though this might not be a family disease. No reports on disclosure to sexually abused children could be identified.

Honesty probably remains the most important component of disclosure together with a well-established support system to which the family and/or child could turn. Neither parents nor health workers want inadvertently to inflict more suffering on a child than is already present from the abuse and illness itself.[25] However, according to the American Academy of Pediatrics there does not appear to be evidence to support the fear that disclosure of HIV infection to children will cause negative consequences.[26] Disclosure may be advantageous in that it allows for better understanding of the illness, more open involvement in medical care decisions, increased opportunities for support and improved trust in the health care providers.[27,28]

Children often suspect their HIV status long before disclosure.[25] However, disclosure remains a difficult task, best managed by parents together with a paediatric HIV interdisciplinary team, involving at least medical staff, social workers, psychologists and psychiatrists, and trained counsellors. Gerson *et al*.[25] describe in detail the successful process of disclosure used at their institution using the following framework: *(i)* information gathering and trust building; *(ii)* education; *(iii)* determining when the time is right for disclosure; *(iv)* the actual disclosure event; and *(v)* monitoring post-disclosure coping and managing disclosure-related problems or challenges.

The final decision when to disclose remains with the parent

Table I. Summary of circumstances in which HIV testing is recommended[1,2,6]

Recommendations for HIV serological testing in child sexual abuse cases
1. The child has another acquired sexually transmitted disease
2. The child has an anal or a vaginal injury or discharge or other mucosal injury suggestive of abuse
3. The child has been documented to have experienced penile invasive abuse
4. The child is reported for suspected CSA and outcome is confirmed, suspected or unknown
5. The child is exposed to a known HIV-infected perpetrator of abuse or a perpetrator with unknown HIV status, especially if risk factors are identified, such as clinical findings of HIV infection, previously having served a prison sentence, intravenous drug user and multiple sexual partners
6. The child was abused by multiple assailants
7. The child has clinical findings compatible with HIV infection
8. Frequent exposure to abuse
9. A history of high-risk behaviour in an adolescent
10. Parent or young person requesting testing

Table II. HIV post-exposure prophylaxis regimen for sexually abused children

Age group and 28-day antiretroviral regimen — drug and dose
≥ 13 years of age (≥ 35 - 40 kg)
*Zidovudine/lamivudine combination (Combivir) 1 tablet twice daily
plus (risk and availability dependent)
†Lopinavir/ritonavir (Kaletra) > 12 years or > 40 kg: 5 ml or 3 capsules twice daily
< 13 years of age
*Zidovudine 180 mg/m² body surface area/dose orally twice daily (maximum 300 mg/dose)
plus
*Lamivudine 4 mg/kg/dose orally twice daily (maximum 150 mg/dose)
plus (risk and availability dependent)
†Lopinavir/ritonavir (Kaletra)
6 months - 12 years: 7 - 15 kg: 12 mg/kg twice daily
Up to 12 years: 15 - 40 kg: 10 mg/kg twice daily
> 12 years or > 40 kg: 5 ml or 3 capsules twice daily

* Possible alternative nucleoside reverse transcriptase inhibitors (NRTIs)
Abacavir (Ziagen) 8 mg/kg/dose orally twice daily (maximum 300 mg/dose)
Didanosine (ddI/Videx) 90 - 150 mg/m²/dose orally twice daily (maximum 200 mg/dose)
Stavudine (d4T/Zerit) 1 mg/kg/dose orally twice daily (maximum 30 mg from 30 - 60 kg)
†Possible alternative protease inhibitors
Nelvinavir (Viracept) 1 250 mg (5 x 250 mg tablets) twice daily

or caregiver, but they mostly need help. The sharing of difficult news with children is complicated, but health care providers should take on this responsibility and be prepared.

Disclosing of their HIV status to their friends or peers is another aspect of disclosure in which children need guidance. They should be warned not to be indiscriminate in telling peers that they have HIV. Although some reports show a positive clinical effect with disclosure to trusted friends, such as a rise in CD4 count, others warn that disclosure often has a negative psychological impact.[25,29]

Long-term consequences of CSA

Many studies have shown that CSA in both girls and boys is linked to health problems in adolescence and adulthood, including risky sexual behaviour, more sexually transmitted diseases, and injection drug use.[30-33] Currently, the focus is usually on the individual child's sexual abuse, but future treatment should also aim much more at addressing family function and the child's feelings of despair.

Conclusion

The role of CSA as a cause of HIV infection in children is underestimated and needs further research, especially in countries with high HIV prevalence. All possible means should be used to prevent CSA in our communities. However, when prevention fails and children become victims of this crime, the least we can do is to try and prevent the serious consequences such as HIV infection with all the means we have available.

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