

# POST-EXPOSURE PROPHYLAXIS IN PAEDIATRIC SURVIVORS OF SEXUAL ASSAULT

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Over 5 million children are cumulatively estimated to have been infected with HIV worldwide. Although the majority of children acquired the infection through mother-to-child transmission, it has been reported in the USA and recently in the UK that children and young teenagers have been infected through sexual transmission, including sexual abuse.

The scientific efficacy of non-occupational post-exposure prophylaxis (PEP) is unknown. In contrast to the occupational guidelines for adult PEP after exposure to HIV, there are few recommendations for PEP in children. However, regardless of the lack of recommendations there is evidence supporting the value of PEP in paediatrics.

Violent non-consensual sexual acts such as rape have anecdotally been associated with HIV seroconversions (first reported in 1998,<sup>1</sup>) which led to recommendations for PEP after sexual exposure to HIV infection. These recommendations followed publication of results showing that monotherapy with zidovudine (AZT) was effective in reducing the risk of seroconversion among health care workers following occupational exposure to HIV.<sup>2</sup>

A small proportion of children will acquire HIV infection through sexual abuse. Approximately 1.5% of children attending the family clinic at Tygerberg Hospital have been infected with HIV as a result of such abuse.<sup>3</sup>

PEP against HIV using AZT has been shown to decrease the transmission of HIV after needlestick injuries, as well as to reduce mother-to-child transmission.<sup>4</sup>

In May 2000 the Department of Health reported that the group with the highest HIV prevalence was young women aged 13 - 19 years. These findings are significant, as they stress that women most at risk of rape are also those at highest risk of acquiring HIV infection. It is not clear whether this is linked to sexual violence. The presence of other sexually transmitted diseases, especially ulcerative STDs, also poses an increased risk of transmission.<sup>5</sup>

Lastly, the prevalence of HIV infection in sexual assailants has not been documented anywhere, leaving assessment of

the likelihood of exposure very difficult. While background prevalence rates have been estimated for large populations (e.g. pregnant women or STD clinic attendees), the generalisability of these data is debatable.

### MEDICAL MANAGEMENT

It is important to remember that a rape survivor is a patient like any other patient, though one with special needs. Unfortunately, in the case of sexual assault in children clinical decisions are influenced by emotions. It is imperative that we manage these appropriately and continue to apply the basics of good clinical medicine.

Most children who are brought to the centre are accompanied by caregivers, who may be parents, relatives or friends. It is essential to remember that during history-taking and examination a caregiver with whom the child is familiar should remain with the child.

- Should the patient be a priority 1 (code red – immediate life-threatening injury) or a priority 2 (code yellow – limb/potential life-threatening injury), the patient is managed in the resuscitation room according to advanced trauma life support protocols.
- If the patient is a priority 3 (code green – non-limb or life-threatening injury), the patient will be treated in a dedicated private room.
- A registered nurse and a medical doctor will start taking a medical history as well as details of the rape. Often children who have been sexually assaulted have been chronically abused, and it is important to obtain relevant information, as the management will differ.
- The patient may have a history of repeated urinary tract infections or vaginitis with vaginal discharge. It is important to note that this type of history in a 4 - 5-year-old child is not appropriate for age and may indicate further investigations. A full history is therefore imperative and the practitioner needs to maintain a high index of suspicion and, if necessary, to report the case to relevant authorities.
- Medical practitioners are legally obliged to report a case of suspected sexual assault. (If this is not done it is

possible that a charge against the practitioner may arise.)

- Once a history is taken, the procedures that will follow are explained in detail to the patient and caregiver. As the child is under age, the parents or guardian of the child are requested to grant permission for examination.
- If the parents/guardian have decided to lay a charge, the appropriate medico-legal examination should take place.
- Crime kits for medico-legal examinations should be available in units where these examinations are carried out.
- With appropriate care and compassion, the examination can be done with minimal trauma.
- Specialist treatment may be required, e.g. a child with vaginal tears should be sutured under general anaesthetic. Surgery may be needed for other injuries, but it is essential that the child be stabilised before transfer.
- Antibiotic prophylaxis is prescribed where necessary. In the case of children the antibiotics of choice are penicillin and metronidazole. The patient must be treated for any additional conditions, such as urinary tract or vaginal infections. Any other traumatic injuries are treated appropriately.

#### POST-EXPOSURE PROPHYLAXIS (PEP)

- Part of the initial history-taking involves pre-test counselling for HIV testing.
- Information regarding the PEP guidelines is given to the parents and/or guardian of the child.
- Informed consent for the baseline HIV test is obtained.
- If the patient is under age, consent will be given by the appropriate parent/guardian. If they are not available the attending police officers will assist.
- If the parents or guardians are not available the first dose of PEP is administered by clinic staff to avoid any time delay, and consent is then obtained from the relevant parties.
- Only patients who attend the unit within 72 hours of the incident will be offered PEP.
- If the patient is HIV-positive, counselling is carried out and referrals are made to appropriate centres for HIV-AIDS care.
- A pregnancy test should be done if the child is of childbearing age.
- If the patient attends the unit 72 hours after the incident, counselling is carried out, the

parents/guardians are told about HIV-AIDS and the child is given the opportunity to have an HIV test and follow-up testing. These patients are not offered PEP.

- All patients who present within 72 hours of the incident and are HIV-negative are offered a 28-day course of AZT and lamivudine (3TC).
- The dosages used are as follows:

#### AZT

Children < 6 years of age: 90 - 180 mg/m<sup>2</sup>/dose 8-hourly (aim at a dose of 160 mg/m<sup>2</sup>/dose 8-hourly).

Children > 6 years of age: 180 - 250 mg/m<sup>2</sup>/dose 8-hourly (aim at a dose of 220 mg/m<sup>2</sup>/dose 8-hourly).

#### PLUS

#### 3TC

4 mg/kg dose 12-hourly irrespective of age.

*As 3TC is a twice-daily dose it is often easier, once the AZT dose is calculated, to instruct the parents or caregiver to give the AZT as a twice-daily dosage. This creates an easier compliance and patient management system.*

Should the child be able to take tablets it is sometimes preferable to prescribe **Combivir** as a 12-hourly dose.

#### NB: The calculation of body surface area is:

$$(m^2) = \sqrt{\text{weight (kg)} \times \text{height (cm)} \div 60}$$

- On initial admission immediate counselling is initiated in the form of crisis intervention by the registered nurse and medical doctor.
- A qualified trauma counsellor is called in when the patient and their family/friends come to the unit. This counsellor will continue with post-traumatic stress management for the patient and their support system.

#### REFERENCES

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