

Transmission of Bloodborne Infections by Circumcision Procedure

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Abstract

Male circumcision is surgical removal of the foreskin (prepuce) which covers the distal part of the penis. It is also performed for females in certain countries by partial or total removal of the external genitalia in order to inhibit sexual feelings. Male circumcision is well documented to have protective effect against HIV transmission. However, the male and female procedures carried a risk for blood-borne infections such as HIV, hepatitis B virus, and hepatitis C virus. The use of unsterilized instruments is the main cause of disease transmission. Several reports from sub-Saharan Africa revealed that HIV infection could be transmitted during circumcision procedures for both male and female. Though the beneficial effects of male circumcision outweigh the risk of blood-borne infection.

Keywords: Circumcision; Blood-borne infection; HIV; Hepatitis virus

Editorial

Physicians and nurses usually use bone cutter, blade, and other instruments for circumcision. These instruments might not be sterilized properly after each use or just immersed into an antiseptic liquid especially in low-income countries. A structured observational study including 86 traditional male circumcisions was performed in South Africa of which six circumcisions was carried out by one knife. Although the circumcisions were done by trained surgeons and under observation of research doctor, 7% of cases were unsafe [1]. In Muslim society, circumcision is universal. The procedure is mostly performed by barbers in rural and urban areas. Due to lack of awareness and knowledge about transmission of viral hepatitis, most of barbers, during circumcision, use contaminated instruments on multiple clients. This unhealthy practice makes infants prone to bloodborne viral pathogens [2]. In sub-Saharan Africa, significant numbers of children with seronegative mothers are HIV infected. Likewise, substantial proportions of young African who have not had sex are infected with HIV. These findings reveal that some African children and youth acquire HIV through blood exposures in unhygienic healthcare, cosmetic care, and rituals such as circumcision and scarification. These African children and youth may be exposed to HIV and other blood-borne pathogens through circumcision where traditional and medical circumcision are often performed unhygienically [3,4]. The instruments for circumcisions are also used

for incisions, birth procedures, and scarification that result in exposure to blood with potential risk for bloodborne infections (HBV, HCV, and HIV). In eastern and southern Africa, it has been documented that circumcised male and female virgins were substantially more likely to be HIV infected than uncircumcised virgins. The HIV transmission may occur through circumcision-related blood exposures where many observers in this region have recognized the potential for HIV transmission through unhygienic circumcision procedures [5]. This source of transmission could also be concluded from prospective studies in Malawi and Zimbabwe where the annual incidence of HIV infection in persons reporting no sexual exposures during study intervals was 1.2% to 2.4% [6]. Although there is some risk from employment of unsterilized instruments in circumcision, the protective effects of circumcision in regard to HIV infection is well documented. The Centers for Disease Control and Prevention (CDC) have declared a set of provisional guidelines regarding male circumcision, in which they suggest that the benefits of the surgery outweigh the risks [7].

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