

MALE CIRCUMCISION AND HIV IN THE MALIAN MILITARY

Diallo.S (1,3)*, Toloba. Y (3), Coulibaly. SA (1), Dabita. D (2), Diop. S (2), Doumbia.S (2), Keita. B (3)
(1): Infirmerie de garnison du Génie militaire BP 257 Bamako Mali ; (2) : FMPOS, BP 1805, Bamako, Mali ; (3) : Service de Pneumologie, HPG BP 333, Bamako, Mali ; * : drsolo53@yahoo.fr

RESUME:

Dans le but de déterminer l'influence de la circoncision sur la transmission du VIH en milieu militaire, une étude rétrospective a été réalisée de janvier 2000 à décembre 2005 dans l'infirmerie de garnison du Génie militaire portant sur tous les cas de séropositivité recensés dans cette structure. Il s'agissait d'une étude Cas (Militaires non circoncis)-Témoin (Militaires circoncis).

Sur 1183 militaires 1102 étaient des hommes soit 93.2%. Sur les 1102, 57 avaient la sérologie VIH positive (5.1%). Sur les 1102 militaires 154 étaient non circoncis et parmi eux 20 étaient séropositifs soit 12.9%. Sur les 948 circoncis 37 étaient séropositifs soit 3.9%

La circoncision réduit le risque d'infection par le VIH ; mais elle ne doit constituer qu'un appoint des autres méthodes de prévention.

SUMMARY:

In the goal of determine the impact of circumcision in transmission of HIV in military area. A retrospective study has been carried out from January 2000 to December 2005 at the infirmary of Genie military garrison about all HIV positive serology registered in that structure. It was a study of circumcised militaries and uncircumcised militaries as control group.

Among 1183 militaries 1102 were men (93.2%). Among these 1102, 57 have were HIV positive (5.1%). Among 1102 military 154 were uncircumcised and among them 20 were HIV positive (12.9 %). Among 948 of circumcised militaries 37 were HIV positive (3.9%).

Circumcision reduces the risk of infection by HIV; however it has to be considered as supplement among other prevention methods

INTRODUCTION:

More than 20 years have passed since the first case of Acquired Immunodeficiency Syndrome (AIDS) was reported. Significant progress has been made in patient treatment and care. Despite the availability of anti-retroviral treatment (ARV), new tools are needed to achieve the goal of reducing HIV transmission (1). Sub-Saharan Africa, which comprises 90% of the new infections worldwide, is also the region where the ARV use is increasing due to the cost. ARV treatment can prevent infection in children by reducing mother to child transmission, whereas in adults ARV can only prolong life expectancy by 4 to 7 years. In addition, an effective vaccine will not be available for at least ten years (2). Thus, prevention remains the primary weapon against HIV/AIDS. The hypothesis whereby circumcision of males could reduce the risk of infection was put forth early in the years of epidemic. Meta-analysis reported an adjusted relative risk for HIV infection in circumcised males to be 0.42 (range: 0.34 to 0.54) (4). In contrast, Cochrane gives another interpretation. Although these studies cannot prove a causal link, circumcision can nevertheless provide direct and indirect protection against HIV infection. Decreased incidence of Sexually Transmitted Diseases (STDs) can provide direct protection, whereas the resection of the prepuce where microlesions that promote HIV entry in the host can occur, can offer indirect protection.

OBJECTIVE: To determine the effect male circumcision on HIV burden in the military.

METHODOLOGY: This was a retrospective study conducted among HIV positive males between January 2000 and December 2005 in the infirmary of Garnison du Génie militaire du Mali. We have included all soldiers in whom HIV and circumcision status were known. Data were reported using Microsoft Office 2000 (Word, Excel) and the relative risk was calculated using the formula, $RR=RT/RC$. The Chi2 test was used in statically analysis with a significance of $P<0.05$

$RT = Ev / Eff = 37/948 = 0.04$

$RC = Ev / Eff = 20/154 = 0.13$

$RR = 0.04/0.13 = 0.30$

RT = Risk among circumcised

RC = Risk among non-circumcised

Ev = Number of HIV positive

Eff = Number of study volunteers

RESULTS :

Among 1183 soldiers, 1102 were men (93.2%). Out of 1102 male 57 (5.1%) were HIV positive. The number of non-circumcised males was 154 among whom 20 were HIV positive (12.9%). (Table1). Of 948 circumcised men, 37 were seropositive (3.9%). (Table1).

DISCUSSION:

The HIV prevalence in Mali is 1.7% according to the Enquête Démographique et Sociale du Mali III (EDSM III) (6). The prevalence was found to be 5.1% in the Garnison du Génie militaire, which confirms the fact that the military constitute a population at greater risk for HIV infection. This may be due in part to frequent displacements far from their family internally and outside the country (Peace

keeping troops in Democratic Republic of Congo, Liberia, Sierra Leone, etc.), as well as their physical condition, which is synonymous with virility, and finally the poor condom use despite the educational campaign.

The risk for HIV infection was three times greater among non-circumcised population (RR=0,30 [0.18-0.50] P< 0,001). The ethnic group in Mali (Bobos) is mostly Catholic or Animist, in which males are not generally circumcised. Young people from this community enlist in the Malian Army at high rate. They lived in the barracks where they rapidly adopt the life style of others soldiers who are circumcised.

In Mali, circumcision is routinely performed in newborn males or at the latest in boys aged 3 to 5 years. Educational campaigns promoting circumcision have encouraged young soldiers from this ethnic group to be circumcised at 25 and even as late as 40 years of age.

CONCLUSION:

Although circumcision can reduce the risk of HIV, it can only be considered in support of other tools of prevention such as, condoms use, early detection of suspected cases, abstinence, treatment of STDs and prevention of mother to child transmission.

REFERENCES

1. Carael M, Holmes K, editors (2001) The multicenter study of factors determining the different prevalences of HIV in sub-Saharan. AIDS 15: S1-S4
2. Harrington M, Huff B, Camp R, Jeffreys R, Swan T, et al. (2005) what's in the pipeline? New HIV drugs, vaccines, microbicides, HCV and TB treatments in clinical trials. New York: Treatment Action Group.

3. Auvert B, Taljaard D, Lagarde E, Sobngwi Tambekou J, Sitta R et al. (2005) Randomized, controlled intervention trial of male circumcision for reduction of HIV infection risk : The ANRS 1265 trial. PLoS Med 2: e298 DOI: 10.1371/ journal.pmed.0020298.

4. Weiss HA, Quigley MA, Hayes RJ (2000) Male circumcision and risk of HIV infection in sub-Saharan Africa: A systematic review and meta-analysis. AIDS 14: 2361-2370.

5. Siegfried N, Muller M, Deeks J, Volmink j, Egger M, et al. (2005) HIV and male circumcision- A systematic review with assessment of the quality of studies. Lancet Infect Dis 5: 165-173

6. EDSM III, Ministère de la santé, Mali; 2003

Table 1: Distribution of soldiers according to HIV and circumcision status.

HIV \ Circumcised	HIV positive # %	HIV negative # %	TOTAL # %
YES	37 3,9	911 96,1	948 100
NO	20 12,9	134 87,1	154 100
TOTAL	57 5,1	1045 94,9	1102 100

RR = 0.30 (0.18-0.5)
Khi 2 = 22.3 P< 0,001