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Press release

Circumcision effectively reduces the risk of HIV infection "in real life"

The ANRS-12126 "Bophelo Pele" Project implemented in the township of Orange Farm in South Africa has confirmed the effectiveness of a large-scale program of voluntary medical male circumcision in prevention of heterosexually acquired HIV infection. The follow-up of over 3300 men shows a 57% to 61% reduction in the rate of new HIV infections in circumcised men compared with uncircumcised men. This study, headed by Prof Bertran Auvert and his colleagues, also shows that a circumcision program can be rapidly and effectively implemented in African communities where circumcision is not a social norm. These results, published in PLoS Medicine, argue for accelerated roll-out of voluntary male circumcision programs on the African continent in order to improve prevention of HIV transmission.

Three randomized trials have shown that male circumcision has a protective effect on the risk of HIV infection in men. The first publication dates from 2005 (ANRS-1265 study in South Africa) and its results were subsequently confirmed in Kenya (2007) and Uganda (2007). These studies showed that the risk of circumcised men being infected by HIV was reduced by 50% to 60%. These results led UNAIDS/WHO to recommend in 2007 the circumcision of adult males as a strategy of additional HIV prevention in communities with a high prevalence of HIV and a low prevalence of circumcision.

There remained, however, a need to show that the roll-out of circumcision "in real life" reduces both the incidence (rate of occurrence of new infections) and the prevalence (proportion of people infected in the total population) of HIV infection in men. This had been suggested by preliminary results from the ANRS-12126 "Bophelo Pele" Project of Bertran Auvert and colleagues presented at the International AIDS Society Conference 2011. These results are now confirmed in the PLoS Medicine article, the first scientific publication to show that adult male circumcision "in real life" effectively reduces the risk of HIV infection in men (1).

Between 2007 and 2011, the ANRS-12126 "Bophelo Pele" Project was conducted by Prof Bertran Auvert (UMRS-1018 Inserm, Hôpital Ambroise Paré and Université de Versailles Saint-Quentin) and his colleagues from the National Institute for Communicable Diseases, the Social Sciences Faculty, and Progressus (Johannesburg, South Africa), and from Johns Hopkins University (Baltimore, USA) and the Bichat Hospital (Paris, France). Free, medical circumcision was offered to all male volunteers aged from 15 to 49 years in a population of 110 000 adults in the township of Orange Farm in South Africa. More than 20 000 circumcisions were performed, accompanied by a large information provision and prevention program.

An anonymous questionnaire on sexual practices was administered to 3338 men recruited from the township population who were invited to undergo HIV screening, which included a test to determine, in the event of seropositivity, whether the infection was recent.

The proportion of circumcised men in this sample of 3338 increased from 12% at the start to 53%, and was 58% in the 15- to 29-year-olds. Importantly, sexual behavior, in particular condom use, did not differ between circumcised and uncircumcised men. In contrast, the prevalence and incidence of HIV infection were much reduced in the circumcised men.

The researchers considered that without the voluntary circumcision program, HIV prevalence would have been 19% higher in the study population. This effect is more marked in the 15- to 29-year-olds, in whom the prevalence would have been 28% higher. Also apparent was a decrease in the number of recent infections among the circumcised men. Circumcision was therefore associated with a 57% to 61% reduction in the rate of new infections.

Prof Bertran Auvert considers that “these results are important in two ways. First, they confirm the efficacy of the circumcision practiced on a population scale in reducing HIV transmission appreciably among the men of this population. Second, they show that it is possible to achieve this result in just a few years, including in populations where circumcision is not a common practice.”

The ANRS-12126 Project provides an argument for speeding up the roll-out of voluntary circumcision programs, notably in sub-Saharan Africa, which is home to the vast majority of the 2.2 million people infected by HIV every year worldwide. Prof Jean-François Delfraissy, Director of the ANRS, considers that “given the impact observed in this study on limiting the risk of HIV acquisition in circumcised men, the scale-up of circumcision should more than ever be a public health priority in South and East Africa.”

The ANRS-12126 Project is continuing with the aim of elucidating the effect of circumcision on infection risk reduction in the general population, and in particular among women.

Source :

(1) Association of the ANRS-12126 Male Circumcision Project with HIV Levels among Men in a South African Township: Evaluation of Effectiveness using Cross-sectional Surveys. PLoS Med 10(9): e1001509. doi:10.1371/journal.pmed.1001509
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