Male Circumcision: Association with HIV Prevalence, Knowledge and Attitudes among Women: Findings from the ANRS 12126 Study

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Objective

To assess the association of sexual partners' male circumcision (MC) status with HIV prevalence among women, and their knowledge and attitudes regarding MC.

Introduction

Little is known about the impact of the current rollout of voluntary medical male circumcision (VMMC) in Africa among women.

This ANRS-12126 study took place in the township of Orange Farm (110 000 adults), South Africa, 4 years after the set up of a VMMC rollout program, **The ANRS 12126 Bophelo Pele Project**, in 2008.

In this community, medical MC prevalence increased from 12% to 53%, and HIV prevalence among circumcised men was 48% lower than among other men.

Methods

Three random independent cross-sectional surveys were conducted in 2008 , 2010 and 2012 among 5 561 women aged 15 to 49.

Blood samples were tested for HIV. Background information and sexual behavior, reported sexual partners' MC status, and knowledge and attitudes regarding MC were collected.

Prevalence rate ratios (PRR) and adjusted PRR (aPRR) were calculated using Poisson regressions.



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Results

HIV prevalence was 30.1% in the sample, peaking at 47.8% in the 30 to 34 age group.

Among women ever having had sex, 30.0% reported Having Had Only Circumcised Partners (WHHOCP).

HIV prevalence among WHHOCP was lower than among other sexually active women:

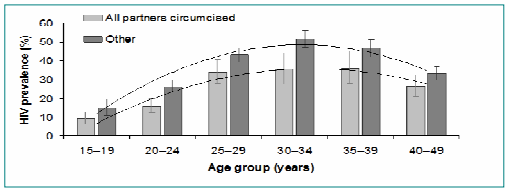
22.4% (20.3% to 24.9%) vs. 36.6% (35.0% to 38.2%)
PRR=0.72 (0.64 to 0.80); p<0.001
aPRR=0.85 (0.76 to 0.95); p=0.004

No difference in sexual behavior was detected: prevalence of consistent condom use in sexual partnerships was 37.5% with circumcised partners and 38.6% with uncircumcised partners: aPRR=1.00 (0.91 to 1.09); p=0.952.

Among sexually active women, 84.5% could correctly identify a circumcised penis on a picture.



Between 2008 and 2012, the proportion of women willing to have their male children circumcised increased from 83.0% to 96.0% (p<0.001).



MC Knowledge and attitudes among women from Orange Farm

Circumcised men do not need to use condoms to protect them from HIV	*Agree*	7.8%
	Disagree	**87.3%**
	Do not know	4.9%
Circumcised men can become infected with HIV	*Agree*	**90.6%**
	Disagree	5.4%
	Do not know	4.0%
A woman having unprotected sex with a circumcised HIV positive partner is	*Fully protected against HIV*	1.0%
	Partially protected against HIV	8.6%
	Not protected against HIV	**90.4%**
Circumcision increases pleasure during sex	*Agree*	**57.9%**
	Disagree	14.2%
	Do not know	27.9%
It is easier for circumcised men to use a condom	*Agree*	**55.1%**
	Disagree	20.4%
	Do not know	24.5%
Most women prefer circumcised men	*Agree*	**74.5%**
	Disagree	8.5%
	Do not know	17.0%
In general, you prefer to have sexual intercourse with a man who is[1]	*Circumcised*	**74.4%**
	Uncircumcised	3.0%
	No preference/Do not know	22.6%

[1]Among women having had sexual intercourse with both circumcised and uncircumcised men (n=2200)

Conclusions

The findings reveals women's satisfactory knowledge and attitudes regarding MC. **The significant association of women's HIV prevalence with their sexual partners' MC status** is probably due to the lower HIV prevalence rate among circumcised men. This study is encouraging for the current rollout of VMMC in Southern and Eastern Africa.