Male circumcision for the prevention of HSV-2 and HPV infections and syphilis. Tobian AA, Serwadda D, Quinn TC, Kigozi G, Gravitt PE, Laeyendecker O, *et al*. *N Engl J Med* 2009; **360**: 1298–1309

Tobian and his team of researchers looked at data from two randomised controlled trials, to evaluate whether male circumcision in HIV-negative adolescents and adult men in Uganda would prevent acquisition of HSV-2, HPV and syphilis infection.

Previous clinical trials have shown protection against acquisition of HIV infection in circumcised males.[1,2] If circumcision could be shown to have further advantages in protecting against sexually transmitted infections (STIs) of even greater prevalence, this would add to support for circumcision as a beneficial public health intervention for males.

The trials in this study were carried out in parallel with a trial regarding male circumcision and HIV infection in Uganda. The research question in this case was clearly defined with regard to acquisition of HSV-2 or syphilis infection at baseline, 6, 12 and 24 months. A subgroup were evaluated for HPV infection at baseline and 24 months.

The authors did not describe how they randomised participants to intervention and control groups. There were no significant differences in the demographics of the two groups; however, there were some differences in sexual practices at baseline that could influence outcomes, namely significantly higher levels of condom use in the intervention group and higher alcohol use associated with sex in the control group. Results were adjusted to account for differences in sexual practice.

The method for selecting the small subgroup (609 of 3393 participants) for HPV testing was not described, although again the numbers appeared equally spread between the intervention and control groups.

In this study it was not possible to blind participants to which arm they were allocated; however, it was not described whether researchers carrying out follow-up questionnaires were blinded. Methodology for obtaining sexual behaviour data is not described, and may be significant for findings in such an intimate area.

Results relating to outcomes were clearly presented with robust statistical analysis. Acquisition of HSV-2, syphilis and HPV were described as hazard ratios and *p* values calculated both before and after adjustment for characteristics and practices. There was a significant reduction in HSV-2 and HPV infections, but no significant difference for syphilis infections. Confidence intervals were described and were supportive of the conclusions. The large number of participants lends further weight to the trial, although initial power calculations were not included in the report.

Overall, this is an important piece of research whose findings are significant in the debate surrounding effective interventions to combat the spread of STIs. The population involved here is one composed of young African heterosexual males, and we do not yet know if these findings can be extrapolated to Caucasian populations or to men having sex with men.

There is a postulated biological mechanism for the reduction in rates of HSV-2 and HPV infections in circumcised men involving anatomical and cellular factors, therefore it is possible that this intervention will be more widely effective. This would, however, require further study.

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2 Auvert B, Taljaard D, Lagarde E, Sobngwi-Tambekou J, Sitta R, Puren A. Randomised, controlled intervention trial of male circumcision for reduction of HIV infection risk: the ANRS 1265 trial. *PloS Med* 2005; **2**(11): e298.

Prevalence of child marriage and its effect on fertility and fertility-control outcomes of young women in India: a cross-sectional, observational study. Raj A, Saggurti N, Balaiah D, Silverman JG. *Lancet* 2009; **373**(9678): 1883–1889.

This very interesting and yet alarming article gives us an insight into the health consequences of the still prevalent child marriages in India. Defined as marriage before 18 years of age, child marriage has serious health consequences for national development and grave health consequences for both the young women and their children. India has maintained laws against child marriage since 1929. However, the legal age for marriage was increased from 12 to 18 years in 1978.

In this study, participants were selected from the India National Family Health Survey-3 (November 2005–August 2006). A nationally representative household-based sample was obtained and a uniform sampling design was used across all states. From a staggering sample of 124 385 women, a 95% response was obtained.

The results obtained are eye opening. More than two-fifths of women aged 20–24 years were married before the age of 18 years. Almost half of these women were married before 16 years, of which one-ninth were married before 13 years. Poor, less well-educated girls from the rural areas of Central or Eastern areas of the country were more vulnerable to this practice.

This practice is associated with poor contraceptive uptake and hence increased incidence of unwanted and terminated pregnancies. There is also increased incidence of repeat childbirth within 24 months. A marked association between child marriage and female sterilisation has been shown. Sterilisation reduces condom use in couples, thereby increasing risk of HIV and other sexually transmitted infections.

The recommendations from this study conclude that through government health care initiatives, India should establish reduction of child marriage as an essential element to build on the existing priorities of family planning, and maternal and child health. However, in drawing their conclusions, the authors admit that since their data were based on self-report, they are vulnerable to social desirability and recall biases.

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