**Circumcision reduced the risk of contracting HIV infection in young sexually active Kenyan men**


**In young sexually active men in Kenya, does circumcision prevent the transmission of HIV infection?**

**METHODS**

- **Design:** randomised controlled trial.
- **Allocation:** (concealed)*†.
- **Blinding:** (blinded (outcome assessors))†.*
- **Follow up period:** median 24 months.
- **Setting:** Kisumu district, Kenya.
- **Participants:** 2784 men who were 18–24 years of age (median age 20 y), were HIV negative and sexually active (median 4 partners over lifetime), had haemoglobin concentrations >90 g/l, and planned to stay in the Kisu district for ≥2 years. Exclusion criteria: foreskin covered less than half the glans, haemophilia or other bleeding disorder, high prothrombin time index, contraindications to surgery, or absolute indication for circumcision.
- **Intervention:** circumcision (n = 1391) or delayed circumcision (control; n = 1393). Surgery was done under local anaesthesia in the study clinic, and men were given verbal and written instructions on postoperative wound care. Participants were advised to avoid sexual activity for ≥30 days.
- **Outcomes:** positive result on 2 different HIV tests and adverse effects.
- **Patient follow up:** 91% (intention to treat analysis).

*See glossary.*

†Information provided by author.

**MAIN RESULTS**

The study was stopped early after a third interim analysis. Fewer men in the circumcision group than in the control group contracted HIV infection over the study period (table). Adverse effects occurred in 23 circumcised men; the most common were bleeding and infection (5 occurrences each).

**CONCLUSION**

In young sexually active men in Kenya, circumcision reduced the risk of contracting HIV infection.

---

**Table:**

<table>
<thead>
<tr>
<th>Outcomes at median 24 months</th>
<th>Circumcision</th>
<th>Control</th>
<th>RRR (95% CI)</th>
<th>NNT (CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV infection</td>
<td>2.1%</td>
<td>4.1%</td>
<td>53% (22 to 72)</td>
<td>45 (34 to 109)</td>
</tr>
</tbody>
</table>

*Abbreviations defined in glossary; RRR, NNT, and CI calculated from data in article.

---

**Commentary**

The study by Bailey et al indicates that adult male circumcision, together with other HIV prevention interventions, reduces HIV acquisition by half. This finding confirms those of many previous observational studies and 2 other randomised controlled trials. The effect is based on a biologically plausible mechanism of action, which has been suggested by in vitro studies. The strong treatment effect was seen in both observational and intervention studies. The authors document this beneficial effect of circumcision despite sustained increases in self-reported safer sexual behaviour, including consistent condom use. While the Kenyan trial findings provide new options for men, an ongoing trial will examine the potential for circumcision to influence the probability of HIV transmission to women from infected men.

The low rate of adverse events related to circumcision, as performed in a well-equipped centre, suggests what may be achieved. A critical aspect of developing public health programmes that include circumcision will be the ability to provide suitable surgical care. Bailey et al speculate whether the higher rates of adverse events observed in another randomised trial in South Africa, in which general practitioners used the same surgical technique in their offices, may have been a function of the surgical setting and aftercare. The finding that circumcision was only partially efficacious also indicates that this cannot be seen as a stand-alone intervention but will need thoughtful and sustainable integration into existing prevention approaches.

Guy de Bruyn, MBCh MPH University of the Witwatersrand Johannesburg, South Africa

Circumcision reduced the risk of contracting HIV infection in young sexually active Kenyan men

Evid Based Med 2007 12: 104
doi: 10.1136/ebm.12.4.104

Updated information and services can be found at:
http://ebm.bmj.com/content/12/4/104

These include:

References
This article cites 4 articles, 0 of which you can access for free at:
http://ebm.bmj.com/content/12/4/104#BIBL

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Topic Collections
Articles on similar topics can be found in the following collections

HIV/AIDS (55)
Immunology (including allergy) (571)
Sexual transmitted infections (viral) (58)
Ethics (96)
Clinical trials (epidemiology) (1594)
General practice / family medicine (352)
Health education (374)
Other anaesthesia (29)

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/