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Does male circumcision cut risk of HIV infection?

For the first time, a surgical intervention study attests to a link. What do we tell new parents?

Male circumcision is one of the most enduring controversies in newborn medicine, partly because there is no clear evidence for or against routine circumcision, from a public health standpoint. Efforts to identify a research-based approach have been frustrating. However, an interventional study from South Africa, which involved 3,000 men, showed for the first time that circumcising adult men can dramatically lower their risk of becoming infected by HIV through heterosexual sex.¹ The study seems to correlate with epidemiologic studies that found a link between lack of male circumcision and an increased HIV infection rate.

What are the medical risks and benefits?

For many parents, medical reasons are not the decisive factors; circumcision is performed within a cultural and religious context. In some locales, the super-majority of boys are circumcised, and to avoid the stigma of “being different,” most parents ask for the procedure. In some religious faiths, circumcision is a demonstration of a covenant with God.

Benefits. Clinical studies indicate a reduced risk of urinary tract infections, penile cancer, penile inflammation, and transmission of some sexually transmitted infectious disease. For example, in a cohort study of 58,000 infants, the rate of hospitalization for urinary tract infection among circumcised and uncircumcised males was 1.9 versus 7.0 per 1,000 boys, respectively.²

Other studies have demonstrated that

circumcision not only reduces the risk of penile cancer, which is truly rare, but also reduces the risk that a female sexual partner will develop cervical cancer—which is not at all rare. Monogamous female partners of circumcised men have been found to have half the risk of cervical cancer compared to women with uncircumcised partners.³ This may be due to a lower rate of human papillomavirus in circumcised men. **Risks** of circumcision are mainly pain, bleeding, and local infection. Small but vocal groups vociferously oppose circumcision because the newborn cannot consent⁴ and because they believe the procedure may cause long-term emotional harm.⁵

AAP and ACOG recommendations

Based on an evaluation of risks and benefits, the American Academy of Pediatrics advised: “existing scientific evidence demonstrates potential medical benefits of newborn male circumcision, but the data are not sufficient to recommend routine neonatal circumcision. To make an informed choice, parents of all male infants should be given accurate and unbiased information and be provided the opportunity to discuss this decision.”⁶ The American College of Obstetricians and Gynecologists supports this policy and adds that analgesia such as a dorsal penile nerve block or subcutaneous ring block should be used routinely for the procedure.⁷

Interestingly, the rate of newborn circumcision is on the rise: 48% of newborn males were circumcised in the United States in 1988–1991 versus 61% in 1997–2000.⁸

WHAT DO YOU THINK?

How should we answer parents who ask about circumcision of their newborn?

Write and tell us!

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CONTINUED

Epidemiologic studies of HIV risk

The role of circumcision in preventing sexually transmitted diseases has great public health potential, especially in countries with high rates of HIV infection. Many epidemiologic studies have reported a reduced risk of acquiring HIV infection with circumcision. A review of 30 studies found that uncircumcised men had an increased risk of HIV infection of 1.5 to 8.4 compared to circumcised men.⁹

A remarkable surgery study

Now, an interventional trial strongly supports the epidemiologic studies. In a clinical trial¹ led by Dr. Bertran Auvert, more than 3,000 South African men, aged 18 through 24, were randomized to surgical circumcision or a control group that was not treated. After 13 to 21 months, the circumcised men had a 65% reduction in the rate of acquisition of HIV; new HIV infection was detected in 51 men in the control group compared with only 18 men in the circumcised group.

The complete report is not yet published due to issues regarding the investigators' decision, approved by the local human subjects protection committee, that the HIV-positive men would not be routinely informed about their HIV status.

Three additional surgical trials that are underway in Africa will help clarify the benefit and risk of circumcision for prevention of HIV infections.

The unanswered questions

If clinical trials confirm the finding that circumcision provides strong protection against developing HIV, then in regions with a high prevalence of the infection, a simple surgical procedure may be one of the best interventions to prevent a life-threatening disease.

Key research questions are:

- Does circumcision reduce the ability of HIV-infected men to transmit the virus?
- If circumcision is performed to reduce HIV risk, does it actually discourage "safe" sexual practices?

- How do we balance the lesser risks (pain, bleeding, local infection) with potentially lifesaving benefits?

It is unlikely that *any* single intervention will markedly reduce HIV infection unless we find a way to simultaneously strengthen conventional prevention behaviors.¹⁰

What do you tell your patients?

In the field of medicine, new data require constant changes in how we handle common clinical situations. At OBG MANAGEMENT we are interested in how you counsel your patients about the risks and benefits of circumcision. Please send us your insights regarding how to inform patients about the potential risks and benefits of the procedure.



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REFERENCES

1. Cohen J. AIDS research. Male circumcision thwarts HIV infection. *Science*. 2005;309:860.
2. To T, Agha M, Dick PT, Feldman W. Cohort study on circumcision of newborn boys and subsequent risk of urinary-tract infection. *Lancet*. 1998;352:1813-1816.
3. Castellsague X, Bosch FX, Munoz N, et al; for the International Agency for Research on Cancer Multicenter Cervical Cancer Study Group. Male circumcision, penile human papillomavirus infection, and cervical cancer in female partners. *N Engl J Med*. 2002;346:1105-1112.
4. Poland RL. The question of routine neonatal circumcision. *N Engl J Med*. 1990;322:1312-1315.
5. Boyle GJ, Bensley GA. Adverse sexual and psychological effects of male circumcision. *Psychol Rep*. 2001;88:1105-1106.
6. American Academy of Pediatrics, Task Force on Circumcision. Circumcision policy statement. *Pediatrics*. 1999;103:686-693.
7. American College of Obstetricians and Gynecologists. Committee on Obstetric Practice. ACOG Committee Opinion. Circumcision. Number 260, October 2001. *Obstet Gynecol*. 2001;98:707-708.
8. Nelson CP, Dunn R, Wan J, Wei JT. The increasing incidence of newborn circumcision: data from the nationwide inpatient sample. *J Urol*. 2005;173:978-981.
9. Moses S, Plummer FA, Bradley JE, Ndinya-Achola JO, Nagelkerke NJ, Ronald AR. The association between lack of male circumcision and risk for HIV infection: a review of the epidemiological data. *Sex Transm Dis*. 1994;21:201-210.
10. Auvert B, Males S, Puren A, Taljaard D, Caraël M, Williams B. Can highly active antiretroviral therapy reduce the spread of HIV? A study in a township of South Africa. *J Acquir Immune Defic Syndr*. 2004;36:613-621.

FAST TRACK

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