

New male circumcision device for HIV prevention studied by NewYork-Presbyterian/Weill Cornell

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With the recent endorsement by the World Health Organization (WHO) and scientists worldwide of adult male circumcision as an important strategy for HIV prevention, there is increased urgency to develop safe and cost-effective circumcision services. This is especially the case in Africa where HIV/AIDS continues to spread at an epidemic rate.

Studying this method are Dr. Marc Goldstein and physician-scientists at NewYork-Presbyterian Hospital/Weill Cornell Medical Center, who are evaluating an innovative circumcision device developed in China and will initiate a study of the device in Africa in the coming months.

The device, named the ShangRing after its inventor, Mr. Jian-Zhong Shang, consists of two concentric plastic rings that sandwich the foreskin, allowing it to be cut away without suturing and with minimal bleeding. Performed in a clinic under local anesthesia, the procedure takes less than five minutes, compared with approximately 20 to 30 minutes for a traditional "free hands" circumcision that requires suturing. The patient returns in one week for device removal.

"Circumcision with this technique promises to be faster, safer and more acceptable to patients than conventional surgical circumcision methods," says Dr. Goldstein, the study's principal investigator. He is urologist and specialist in reproductive medicine at NewYork-Presbyterian Hospital/Weill Cornell Medical Center, the Matthew P. Hardy

Distinguished Professor of Reproductive Medicine and Urology at Weill Cornell Medical College, and senior scientist at The Population Council, Center for Biomedical Research, located on the campus of The Rockefeller University.

The hope is that with these advantages, circumcision will become more commonplace (currently only between 15 and 50 percent of sub-Saharan males are circumcised). Its advantages include reduced risk of a variety of sexually transmitted diseases (STDs), notably HIV.

"Circumcision is the only new HIV prevention method to demonstrate consistent efficacy in randomized controlled trials," notes co-principal investigator Dr. Philip S. Li, associate research professor of urology and reproductive medicine and director of microsurgical research and training at the Center for Male Reproductive Medicine and Microsurgery at Weill Cornell Medical College.

Three randomized controlled trials in Kenya, Uganda and South Africa reported a protective effect (up to 60 percent) of circumcision against HIV infection. The World Health Organization, the Joint United Nations Programme on HIV/AIDS (UNAIDS), and other global reproductive health organizations such as EngenderHealth have recognized circumcision as an important method to reduce HIV infection.

The ShangRing has been used to circumcise several thousand Chinese men since 2005. Preliminary reports of 1,200 patients indicate good results with minimal complications. The ShangRing, with 15 patents pending in 85 countries, is currently available only in China. FDA evaluation is under way.

"The beauty of this device is its simple, innovative design," says Dr. Howard Kim, a fellow in male reproductive medicine and microsurgery at NewYork-Presbyterian Hospital/Weill Cornell Medical Center and

member of the Weill Cornell team that traveled to China to learn this new technique. "Although many male circumcision devices are available, they have not gained widespread acceptance due to high complication rates or difficulties with surgical technique."

"Even non-physician health care providers will be able to learn this procedure to safely perform circumcisions in resource-poor regions," adds Dr. Richard Lee, a chief resident in urology at NewYork-Presbyterian Hospital/Weill Cornell Medical Center and another member of the China team.

The NewYork-Presbyterian/Weill Cornell team, in collaboration with the nonprofits EngenderHealth and The Population Council, are planning a small pilot study in Nyanza, Kenya, to test efficacy, safety and acceptability of the technique. Local health providers who perform circumcisions in a clinical setting will be recruited and trained in the procedure by the NewYork-Presbyterian/Weill Cornell team. The pilot study is expected to be followed by a multicenter clinical trial that will compare the ShangRing technique to traditional circumcision methods.

Male circumcision has been performed as far back as ancient Egypt, and the practice has continued through the ensuing centuries for religious, cultural and sociopolitical reasons. Performing circumcision for potential health benefits gained momentum in the 19th century with the advent of anesthesia and the initial epidemiological studies demonstrating lower rates of venereal diseases in circumcised men. Recent studies have shown that circumcised men are at significantly lower risk of urinary tract infections and sexually transmitted infections such as syphilis and chancroid. Additional studies point to lower risk of invasive penile carcinoma, gonorrhea and chlamydia (in female partners).

Source: New York- Presbyterian Hospital

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