

A Male Circumcision Service at the University Teaching Hospital as a strategy to reduce HIV transmission in Lusaka

K Bowa¹, M Lukobo², D Otolorin³, K Like⁴, M Labib⁵, J S Kachimba⁶, F Manda⁷

1,5,6 & 7. Consultant Urologists, University Teaching Hospital 2. Lecturer University of Chicago USA, 3 & 4. Consultant Obstetrician and Gynaecologist JHPIEGO

Summary

The University Teaching Hospital Urology unit has been running a male circumcision and reproductive health service for almost 2 years. This is the only dedicated service site for Male Circumcision in the region. This service was started because of the increasing evidence of the medical benefits of male circumcision as well as the lack of specific male reproductive health services in the health services in Zambia. Since the clinics inception in August 2004, one randomized control trial in South Africa has reported that male circumcision can reduce HIV transmission by up to 75%. This has increased the importance of male circumcision service as a potential strategy in HIV prevention.

The male circumcision service site has conducted 800 circumcisions with less than 5% complication rate. Two clinical officers perform the majority of circumcisions. This service is a prototype for male reproductive health as a primary health services in sub-Saharan Africa. The sites meet 20% of the immediate demand for this service. Greater demand is expected with the reporting of 2 more randomized control trials. In anticipation of this a national scale up of male circumcision services is proposed.

Background

In the mid 19th century Hutchinson proposed that male circumcision can reduce STI s¹. In 1980 Fink published a letter in the New England journal of medicine claiming that male circumcision can reduce HIV transmission². Since then interest in male circumcision and it's role in HIV transmission has grown. Bailey and co workers have published a systematic review of the literature on this subject in 2002³. The ecological data shows large discrepancies in HIV prevalence within Africa. The key difference which has been noted in male circumcision rates are that, where male circumcision rates exceed 80%, HIV prevalence is below 10%, while where circumcision rates are below 20% the prevalence of HIV is close to and often exceeds 20%⁴. Meta-analysis of 38 studies, (mainly African) found circumcised men were

less than half as likely to contract HIV. Sub-analysis of 16 studies of higher risk men found circumcised men 70% less likely to contract HIV⁵. Ten prospective studies all suggest a reduced risk for circumcised men³. The most impressive of these study was done in Rakai, Uganda among discordant couples followed up for 18 months. In this group, 40 of 137 uncircumcised men sero-converted during an 18 month follow up period, while none of 50 who were circumcised sero-converted⁶. In vitro studies, show that the inner foreskin absorbs HIV more easily than the rest of the penile skin⁷.

Zambia is a typical sub-Saharan Africa country, it has a low male circumcision rate (17%) and a high HIV prevalence rate (16%). For these reasons it was a suitable site in which to scale up Male Circumcision Services. With this in mind JHPIEGO (Johns' Hopkins program on reproductive health, obstetrics and gynecology started a program to scale up male circumcision services in Zambia. The estimated cost of setting up this service at the UTH was 20,000 USA dollars. The UTH site was one of 3 sites selected. The other 2 sites were George Clinic and Chinama clinic in Lusaka. Several activities from July 2003 to August 2005 preceded the setting up of these sites⁸. An acceptability study was conducted by Lukobo to determine the safety and community response to Male Circumcision Services in Zambia. It was found that the large majority of people would like to have their children circumcised if this was safe, affordable and in a hospital setting⁹. In August 2004 a Male Circumcision Service was set up at the urology outpatient clinic in UTH.

Male Circumcision Service at UTH

Introduction:

Following a one week training workshop on male circumcision. The male circumcision service was set up at UTH. The urology outpatients clinics sees an average of 50 patients per day for general urology. Up to 70% of patients are seen for prostate disease¹⁰. A minor procedure room located at the clinic performs an average of 6 cases per day. Most of which are diagnostic endoscopy procedures.

With the support of JHPIEGO a dedicated space for Male Circumcision was set up with an operating theatre. Two clinical officers, trained in male circumcision were

Correspondence to: Dr Kasonde Bowa, Dept of Surgery,
University Teaching Hospital
E-mail: kbowa@yahoo.com

to perform these services. Two nurses who were trained counselors were chosen to provide pre operative counseling. The patients are asked to pay a minimum fee of K10, 000 (3 dollars). This is the hospital fee for all minor procedures. Data forms for collection of patient information and follow up were provided. In addition patients were provided information about safe sex practices, condom use and written post operative instructions. The patients are advised not to have sex for 6 weeks after circumcision and to always use a condom. Three days per week were initially provided for Male Circumcision services. Information was provided to all outpatient surgical areas about the commencement of these services. In house referrals or self referrals were all accepted.

The surgical technique used was the Dorsal Slit method. This is the recommended method for male circumcision by the JHPIEGO training manual. Local anesthesia was used in all adult patients. Dorsal nerve block with a supplementary ring block with 2% plain lignocaine is used. The maximum volume on an adult patient is 10mls. The sutures used are 3/0 chromic for hemostasis and 2/0 CC for the circumglandular sutures¹¹. In children, particularly those under 5 years additional sedation with analgesic dose of ketamine, valium and atropine are given. An ambu bag is available for respiratory support should it be needed. Clients return for follow up on days 2 and 7. Subsequently after 1 and the final review after 3 months. The operations and procedures in our clinic follow the prototype of the University of Manitoba (UNIM) research site in Kisumu, Kenya.

Analysis of Male Circumcision Cases

A total of 631 patient have been circumcised at this service site up to April 2006. The average number of cases done is about 50 per month. Prior to the dedicate site about 5-10 cases were done every month for medical or nonmedical reasons (See figure1). The demand for male circumcision is at 100 per week. The maximum number of cases done per week is 20. There is currently a waiting list of 2 to 3 months.

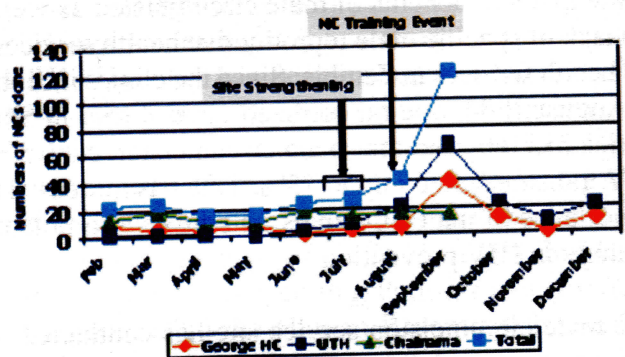
George and Chainama sites were no longer active after site strengthening occurred.

An interim analysis of 230 circumcised patients was done. This showed that the majority of the patients were from low income groups and live in high density housing. Fifty seven percent of patients were from low income groups. The age range was from 6 months to 70 years. The large majority were in the age bracket of 15 to 35 years these made up 40% of the patients who had circumcision done. The largest number were Bemba 25%, which is traditionally a non circumcising tribe, but makes up 32% of the population, and is therefore the largest tribe. The second group were Chewa/Ngoni

group and the Luvala at 22%. Most were unmarried males (85%) and 92% were Christians. In Zambia Christians make up 95% of the religious groups. Most were self referrals 91% and a small number were referred through VCT centres.

The indication for circumcision was non medical in the majority of cases. Over 80% of the client felt that male circumcision was a hygienic and healthy. They had no medical condition that warranted a medical

Fig. 1: Male Circumcision in Lusaka sites: Feb-Dec. 2004



circumcision. There was no major complication in these cases. The average duration of the procedure was 30 minutes and no complications were noted in 90% of clients up to 3 months of follow up. The following minor complications were found; persistent pain (8%), infection (6%) and swelling of the penis (5%).

Discussion

The UTH is the main referral hospital in Zambia. It serves a national catchment area of 10.4 million people. It also serves as a provincial hospital with an immediate catchment area for Lusaka province of 2 million people. As far as we are aware this is the only dedicated Male Circumcision Service Site in the region. Other dedicated sites that we are aware of were set up primarily for research purposes.

Following the donor support the Male Circumcision site has shown an increase of about 400% in the numbers of clients. This increase has still failed to meet the demand for this services, it appears to only be meeting 20% of the current demand. The weekly demand for the service is 100 clients and the service is only able to do 20 cases per week.

Since the site was set up the first randomized controlled study of male circumcision and HIV transmission

conducted in Orange Farm in South Africa has reported. Auvert et al published in July 2005.¹² This study showed that Male Circumcision reduces HIV transmission by 60% to 75%. This study has both resulted in an increased demand for this services as well as further strengthened the case for the place of a dedicated male circumcision service as a primary health service not only in Zambia but the whole sub-Saharan region.

Acceptability studies in the region have shown acceptability rates of 70% to 80% for this service¹³. The studies were before the Orange Farm study reported. It is quite likely that this acceptability has increased. The demand for this service at UTH has confirmed the acceptability studies and has been widespread throughout the region¹⁴ when a training program for male circumcision was advertised in Swaziland earlier this year the turnout was far in excess of what was expected¹⁵. In Zambia the current strategies for HIV prevention have resulted only in a modest decline in the HIV prevalence among the youth¹⁶. In addition the acceptability for condom use is low and has shown a decline among urban males from 55% in 2000 to 50% in 2006¹⁶. The male circumcision complication rates compare well with those published for other male circumcision sites. Especially if it is noted that research sites are likely to have a lot more resource support. It indicates also that this service can be provided by the lowest cadre of practitioners easily and safely. Provided they are trained. Disinhibition is a concern in setting up male circumcision sites of this nature. We have attempted to address these by providing counseling to these patients about safe sex practices before circumcision. The patients are encourage to abstain, be faithful and use condoms. In addition written instructions are given to all clients. Risk of infection during the period of healing is addressed by encouraging abstinence for 6 weeks post circumcision.

The site was set up with initial seed funding by the donors, but has now got to find support through the normal budget lines. This has resulted in failure to sustain the level of initial services and shortages of suture materials and other consumables is common. It is hoped that with the reporting of the two other trials in Kisumu, Kenya and Rakai, Uganda. The scale up of these services will be possible. A plan to scale up the services and set up MCS services as primary health services in all primary health care clinics in Zambia has been proposed. These clinics would be set up in the model done at the UTH. It is hoped that this will be significant strategy in HIV

prevention in the coming years. A target of 100,000 circumcisions per year is proposed. With 200 primary health centres country wide performing 50 circumcisions in the high risk age group of 15 to 35 years.

Conclusion

Sub-Saharan Africa has a high prevalence rate of HIV, over 28 million people are infected. In Zambia the prevalence is at 16%. About 1 million people are in need of ARVs the target is 100,000. Only 60,000 are currently on ARVs. The preventive strategies have been in place now for over 20years. A modest decline in prevalence has been noted among the youth. The current evidence suggests that additional strategies are required in the HIV prevention in the region. Studies are showing that one such strategy may be male circumcision. This strategy is cost effective and has wide acceptance in the community. The Male Circumcision service is a good example of how this service can be run. It runs at low cost is serviced by adequately trained clinical officers and has a low complication rate. There is a need to use this model of the male circumcision service to scale up the provision of this service as a primary health care service in all sub-Saharan African Countries.

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