

The Feasibility of Performing Male Circumcision at Two Public Clinics in South Africa

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Abstract

Study objective: To assess the feasibility of performing male circumcision at the primary care clinic level.

Design: A prospective study of all patients circumcised during a 5-month period (April to September 1997) at two primary care clinics. The design included a short questionnaire administered before the procedure by the first author to assess the demographic characteristics, reason(s) for circumcision and expectations of the patients about the procedure.

Setting: The study was conducted in two peri-urban primary health care clinics namely Hebron and Bethesda, located in the Odi health district of the North West Province.

Results: Seventy-five (75) male circumcisions were performed during the 5-month period. The response rate for the questionnaire was 100% and the majority of the participants were adolescents (84%). Almost all the adolescents reported that their friends considered and referred to them as "small boys" because they were not circumcised and that was the main

reason for the procedure. All the participants expected circumcision to be painful, but the majority (89,3%) expressed the need to receive anesthesia for the procedure. The healing time of the circumcision wounds was within ten days for the vast majority of the participants (71/75), and pain at the operation site was the most common complication following the procedure – 29,3% (22/75). No wound infection was reported or seen during the study.

Conclusion: This study demonstrates the feasibility of performing safe male circumcision at the primary health care level at a reasonable cost to the community when compared with the private health sector. The emotional and psychological component of the initiation into manhood (peer pressure) has an important role in sexual health of young black African men and this needs to be explored adequately, if this procedure is to be widely practiced in the public health system. By so doing, an important window of opportunity for sexual health promotion will be available.

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Introduction

Male circumcision could provide protection against HIV transmission.^{1,2} As such it is an important public health intervention in African communities living south of the Sahara, where HIV is rampant and circumcision is traditionally done to initiate young males into manhood or warrior state.³ However, every year in South Africa, there are media reports of botched circumcisions from traditional schools, which end up in public hospitals with complications such as sepsis, severe hemorrhage, dehydration leading to penile amputation and at times death.⁴ Yet, male circumcision is a minor surgical

procedure that can be performed safely on an outpatient basis with low rates of complications provided the right technique is adhered to.⁵ But, circumcision services are not readily accessible in the public health sector. Because of the orthodox medical doctors' workload and staff shortage in many district hospitals, male circumcision is only performed if there is a medical indication for the procedure e.g. phimosis, paraphimosis, recurrent balanitis or posthitis. The majority of cases categorized as "cosmetic circumcisions" are usually advised to seek care elsewhere. Most families in peri-urban

communities, who do not want or cannot afford to send their children to the traditional circumcision schools, sometimes referred to as "mountain or bush schools", resort to the services of private general practitioners, which are equally expensive.

This study looked at the feasibility of introducing male circumcision service in the public sector at the primary level of care. It was conducted in two peri-urban primary health clinics (Hebron and Bethesda in the Odi health district – Northwest Province) by the visiting general practitioner.

Method

A prospective study of all patients circumcised during a 5-month period (April to September 1997) was done to coincide with the winter season when demand for male circumcision is traditionally high. Clinic nurses advertised the availability of the service during daily health talks. All patients present at such health talks were requested to inform their neighbours and friends. Interested male patients were booked for the procedure once a week, to a maximum of three patients per week, on first come, first served basis. The availability of sterile surgical packs (only three sets per day on average, shared with maternity cases) and time to see other ambulatory patients determined the number of patients booked. Information about the study was communicated to each patient booked for the procedure after which a consent form was signed for the study and procedure. A short questionnaire was administered before the procedure by the principal researcher. The questionnaire covered the demographic character-

istics, reason(s) for circumcision and patients' expectations.

The procedure was carried out using the dorsal slit or sleeve technique using 2% lignocaine for dorsal penile nerve block anesthesia, in the clinic consulting room by the principal researcher assisted by a nurse or a final year medical student rotating through the Family Medicine, Medunsa block. Penile block is the recommended anaesthetic technique for circumcision.^{6,7} This method of anesthesia has been shown to provide better hemostasis against bleeding.^{5,8,9} In addition, the dorsal slit or sleeve technique is a simple technique that can be easily taught to or learned by nurses.¹⁰

Hemostasis was secured by ligating bleeding vessels with absorbable 4/0-catgut suture, with the same suture used for skin approximation after the excision of the foreskin. The wound was dressed with Betadine lotion or "Balsam spray". The post-operative prescription was paracetamol tablets

for pain control and amoxicillin capsules as prophylactic antibiotic for seven days. In a few instances, a non-steroidal anti-inflammatory agent such as ibuprofen was given when paracetamol was out of stock. Although the routine prescription of antibiotics is questionable, it was necessary to offer patients maximum protection because of the uncertainty of the instrument sterilization technique used in the clinics i.e. boiling of instruments followed by immersion in antiseptic solution.

The surgical dressing was checked on the 2nd and 5th post-operative days for signs of bleeding and wound healing respectively, with the dressing removed on the 5th day. Patients were reviewed on the 7th, 10th and 14th days post-operatively to assess and confirm wound healing. The following variables were captured and analyzed using the EPI-info 6.04 computer software: demographic characteristics of participants, reason(s) for circumcision and expectations, healing time and frequency of complications.

Results

Seventy-five (75) male circumcisions were performed during the 5-month period i.e. Hebron (63) and Bethesda (12). The response rate for the completion of the questionnaire was 100%.

Demographic characteristics of the participants:

The age range of the participants was between 14 and 26 years, with 84% (63/75) adolescents and 16% (12/75) young adults. The mean age of the participants was 20 years. The majority of the participants (89,4%), were in secondary schools, and 6,6% (5/75) in tertiary institutions (Table I). All patients came from the immediate catchment areas of the clinics i.e. Mabopane (17%), Hebron (51%) and Garankuwa (32%) (Table II).

Table I: Level of education of participants (n=75)

Education Level	Frequency	Percentage
Primary	3	4,0%
Secondary	67	89,4%
Tertiary	5	6,6%

Table II: Locality of the participants (n=75)

Locality	Frequency	Percentage
Mabopane	13	17%
Hebron	38	51%
Garankuwa	24	32%

Reason(s) for circumcision and expectations

Almost all the participants reported that their friends (both males and females) considered and referred to them as “small boys” because they were not circumcised, and this made them feel inferior among their peers. They claimed that the latter, was their main reason for the procedure. All of them (n=75) expected circumcision to be painful and identified “pain” as a normal consequence of male circumcision. Despite the expectation of pain following the procedure, 89,3% (67/75), expressed the need to receive anesthesia for the procedure. About seventy nine percent (59/75) were scared to go to the traditional circumcision schools because of the negative media reports of complications and the harsh living conditions during the circumcision process. The remaining participants (21%) did not have any strong

objections about going to the traditional circumcision schools or opinions about the negative media reports about the traditional circumcision schools.

Healing time and frequency of complications

The outcome of the procedure in terms of healing time of the wound was encouraging. Confirmation of completely healed wounds occurred in 94.6% (71/75) of the participants by the

10th post-operative day and complete healing took place by the 14th post-operative day in the remaining patients, i.e. 5.4% (4/75) (Table III). All the patients with delayed healing (4/75) reported that they observed significant swelling at the operation site the next day after the procedure. The following complications were recorded following the procedure: **Pain** at operation site – 29,3% (22/75), **swelling** at operation site – 22,7% (17/75), and **bleeding** from operation site – 5,3% (4/75). There was no wound infection reported or seen during the study.

Table III: Healing time of operation site (n=75)

Healing time (post-operative days)	Cumulative Frequency	Cumulative Percentage
5 th day	14	18,6%
7 th day	63	84,0%
10 th day	71	94,6%
14 th day	75	100,0%

Discussion

The response to the introduction of the circumcision service in the two clinics demonstrates that there is unmet need for this procedure in the peri-urban community. Amongst the incentives to seek care, the financial cost may have played a role. Although economic factors were not assessed in the questionnaire, the savings achieved are important through the utilization of a free service in the public health sector when compared with the private health sector i.e. R160,50 for surgeon and anesthetist fees, excluding medication and follow-up visits.¹¹

Although the sample size was limited by the availability of resources, the study provides useful information on the general characteristics of the participants and the procedure. The non-random technique for selection of participants could have introduced “sampling bias” but care was taken not to turn away anybody who requested

the service i.e. the demand was not too heavy to turn away patients (average 3 patients per clinic per week). The majority of patients were at the customary age group for attending traditional circumcision schools in rural black African communities. While in the past, adult members of the community played an important role in initiating demand for traditional circumcision services, participants identified peer pressure as the main reason for seeking circumcision. Uncircumcised black African males struggle to be accepted as men by their peers and those who undergo the procedure within the orthodox health system under anesthesia are considered cowards, who are afraid to go to the traditional circumcision schools. These patients are vulnerable in terms of identity formation and sexual health since peer pressure helps in shaping adolescent sexual practices. The combination of sound technical skills

and promotion of safe sexual and reproductive health is therefore important in planning circumcision services for peri-urban black communities. In addition, the adolescent population is an important risk group for the spread of HIV/AIDS, and should be given the opportunity to discuss sexual health issues, in order to control the pandemic. The strategy would aim at building trusting relationships between the adolescents and primary health care providers for follow-up and continuity of care. Complication rates and severity have been reported to be low in various settings.¹² There is no need for postoperative antibiotic treatment in most cases when the operation is done under strict, aseptic conditions.¹³ However, the routine use of a combination of topical antiseptic and prophylactic antibiotic could explain the absence of sepsis, and might have influenced the healing time

Conclusion

Despite the concerns expressed with the use of routine prophylactic antibiotic and selection of the sample, this study has demonstrated the feasibility of performing male circumcisions at the primary health care

clinic level at a reasonable cost to the community. The emotional and psychological component of the initiation into manhood has an important role in sexual health of young black African men and this need to be

explored adequately, if this procedure is to be widely practiced in the public health sector. It is hoped that this will provide an important window of opportunity for sexual health promotion in the adolescent population.

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