Treatment of circumcision complications in a Tertiary Institution in Tanzania

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Abstract

Background and objective: Male circumcision is a minor surgical procedure that can have both physical and psychological complications. The aim of this study was to review the pattern of presentation of circumcision complications and to highlight on treatment offered at our setting.
Patients And Methods: We retrospectively analyzed the records from files of circumcision complication patients who attended and were managed at Kilimanjaro Christian Medical Centre, a University teaching hospital for the period 2001 -2010.We looked at age at time of circumcision, place where circumcision was done, the circumciser, level of health facility where circumcision was done, type of complication and kind of treatment offered.
Results: 48 patients presented and were treated for circumcision complications during the study period. Mean age at presentation was 8 years and 1month (10.9 years standard deviation) with a range of 1month to 65years. Majority (35.4%) were aged 5 – 18 years at time of circumcision. Sixty six point seven percent of the circumcisions were done by medical circumcisers while the rest were done by traditional circumcisers. Sixty four point six percent of all the cases were circumcised in rural settings. Ninety three point eight percent of all complications after traditional circumcision occurred in rural settings. The commonest type of circumcision complication found was urethrocutaneous fistula (31.3%) followed by glans amputation 25%, and buried glans 14.6%. One patient died. The proportion of those who presented late (more than a year after developing a complication) was noted to be higher in those traditionally circumcised (37.5%) compared to those medically circumcised (21.9%; P= .475). Complications from medical circumcision occurred most in dispensaries (71.9%) and health centres(12.5%). Majority (91.7%) of complications were surgically managed.
Conclusion: Patients with circumcision complications in our setting present late to tertiary level hospitals and majority come with severe complications. Factors such as age at circumcision, place of circumcision and level of health facilities have an influence on outcome of circumcision. Surgery outcome study especially for challenging complications is needed for our management evaluation.
Key words: male circumcision, circumcision complications, health facilities, treatment.

Introduction

Circumcision is a surgical removal of a penile foreskin. Circumcision is regarded as a minor and safe surgical procedure but like any other surgery can result in complications. Few complications are major with physical and psychosocial impact to those who sustain them.

In a review of circumcision complications in Sub-Saharan Africa, the prevalence of complications was reported to range from 0% to 24%(1). In Dar es salaam, Tanzania, Manji noted circumcision of young infants using plastbell complications to be less than 3% (2).

Age at circumcision, type of circumcisers and the level of health facilities where circumcision was done are some of the factors which are associated with circumcision complications (3-8). Management of circumcision complications can either be conservative or surgical depending on the type and severity of the complication. For major complications e.g penile amputation, management can be very challenging and can go as far as gender re assignment (9, 10).

Our institution being a tertiary center is not doing many circumcision surgeries but has been receiving an increasing number of patients with circumcision complications from regions of north, west and central Tanzania. Since circumcision complications have not been given a special attention by health sector stakeholders (no documented study on this issue so far at our institution) while there has been circumcision scale-up programs, this study reviewed the pattern of presentation of circumcision complications and highlight the management offered. The results will provide us with a basis of where to act in order to reduce circumcision complications.

Patients and Methods

A retrospective study of patients with male circumcision complications who were managed at our tertiary level institution during a 10 year period (2001-2010) was done. Patients were traced in admission, clinic and theatre registry books (at urology department). Forty eight names of patients were obtained from the registry books and all the files were retrieved from medical record unit and included in the study. From these medical files all the information such as patient's age, age at circumcision, type of circum-

cision mishap, type of circumciser, place of circumcision, level of health facility where circumcision was done and treatment done were obtained and recorded in data collection forms. Time of presentation at KCMC was categorized as early presentation if patient presented within a month after complication, intermediate presentation if presented after a month up to 1 year and late presentation for those presented after one year. Data was analyzed using statistical package for social sciences (SPSS) version 15.0. Chi-square and Fisher's exact tests were used as appropriate. P-values ≤ 0.05 was considered statistically significant.

Results

Forty eighty males were managed at Kilimanjaro Christian Medical Centre for circumcision complications between the period of 2001 – 2010. Their ages ranged from 1 month to 65 years with mean age of 8 years and 1 month. The circumcision complications and their frequency are shown in table 2.

Out of 48 cases, majority 32(66.7%) were circumcised by medical circumcisers and 16 (33.3%) by traditional circumcisers of those who were medically circumcised, 18 (56.8%) were circumcised by paramedicals, 2 (6.3%) by doctors, 1 case (3.1%) by a nurse and in the remaining 11(34.3%) the kind of medical circumciser was not documented in their files.

Thirty one out of 48 (64.6%) were circumcised in rural places and 17 (35.4%) in urban places. With regard to place of circumcision, we recorded a high number of cases from traditional circumcision (93.8%) coming from rural places and only 6.2% from urban in those medically circumcised 50% each were from rural and urban places (table 3).

Among those who were circumcised medically, 37.5% presented early compared to 25% of traditionally circumcised cases. The proportion of late presenters was higher in those traditionally circumcised (37.5%) compared to those medically circumcised (21.9%) but the difference was not found to be statistically significant.(p-value 0.475).

Medical circumcision in those patients with complications were carried out commonly in dispensaries 23 cases (71.9%), followed by health centers 4 cases (12.5%), hospitals 3 cases (9.4%) and referral hospitals 2 cases (6.3%). Forty four Out of 48(91.7%) were managed surgically and 4 cases (8.3%) were managed conservatively which included blood transfusion, wound care and antibiotic, observation and psychotherapy. The procedures performed are shown in Table 4.

Table 1. Frequency distribution of age at circumcision.

Characteristic	Frequency	Percentage
Neonates (< 1month)	1	2.1
Infants (>1m -1year)	13	27.1
Under five (>1 – 5years)	14	29.2
Older boys (>5 - 18years)	17	35.4
Aldults (> 18years)	3	6.3
Total	48	100.0

Table 2.Frequency distribution of types of circumcision complication

Type of complication	Frequency	Percent
Urethrocutaneous fistula	15	31.3
Glans amputation	12	25.0
Buried glans	7	14.6
Meatal stenosis	6	12.5
Bleeding	2	4.2
Wound infection	2	4.2
Buried penis	1	2.1
Redundant foreskin	1	2.1
Bleeding and death	1	2.1
Excessive skin removal	1	2.1
Total	48	100.0

Table3: Distribution of type of circumcisers according to place of circumcision.

Type of circumciser	Place of circumcision	P-value
	Rural n(%)	Urban n(%)
Medical circumciser	16 (50)	16 (50)
Traditional circumciser	15 (93.8)	1 (6.2).003*
Total	31 (64.6)	17 (35.4)
*Fisher's Exact Test		

Discussion

Complications from circumcision commonly happen in our setting in-spite of circumcision being regarded as a minor, simple and safe procedure. Presentation of these complications to hospitals is uncommon and occurs only when they are severe and interfering with penile functions.

Majority (35.4%) of our patients was aged between 5-18 years and only one case (2%) was circumcised during neonatal period. This finding of having majority in this series circumcised between 5-18years of age might have been influenced by the fact that in our setting majority also tend to be circumcised at that age group. The same observation was noted in the study by Osifo and Oriaifo in Nigeria where they commonly practice neonatal circumcision and so 87% of cases with complications were circumcised dur-

Table 4 Distribution of type of surgical management offered at KCMC.

Surgical management	Frequency	Percent
Fistula repair	15	34.1
Re-circumcision	8	18.2
Neo-meatoplasty	6	13.6
Meatal dilatation	5	11.4
Suprapubic catheterization	3	6.8
Meatotomy	2	4.5
Glanduloplasty	2	4.5
Exploration and resuturing	2	4.5
Skin grafting	1	2.3
Total	44	100.0

ing neonatal period and only 13% after neonatal period.

Urethrocutaneous fistula was the common type of circumcision complication in this study comprising 31.3% of all complications .This is because urethrocutaneous fistula unlike redundant foreskin, wound sepsis and other minor complications interfere with micturation and can only be managed in tertiary institution, so is likely to be presented in tertiary centre.

Proportion of redundant foreskin in this study was 2.1% and proportion of buried glans was 14.6%. The finding is unlike that of study by Osifo and Oriaifo whereby proportion of redundant foreskin was 14.7% and no buried glans was observed (5). Late presentation of patients who had redundant foreskin can largely be a contributory factor for having many cases with buried glans. We recorded one death (2.1%) due to excessive bleeding post circumcision and the patient was clinically diagnosed to have bleeding disorder.

In majority of cases in this study, circumcisions were done by medical circumcisers (66.6%). Increase in awareness of risks for HIV transmission and attendant accessibility of medical practitioners are contributory factors for the trend (4,5).

Circumcisions in this study were carried out in lower level health facilities in most of medically circumcised cases. The finding is not a surprise as these lower level facilities are easily accessible and affordable. They are however, less equipped both in terms of supplies and skillful staff.

We noted inconsistency of management of meatal stenosis. While meatal dilatation was used more often than meatotomy in our study, in other studies meatotomy which is considered to be curative was the only treatment for meatal stenosis (9,10). There was no clear explanation of why meatal dilatation was more preferred than meatotomy. Probably, it is less invasive, but also there is possibility that both have the same early outcome effect as we usually do not see them coming back with re-stenosis after meatal dilatation.

For those patients with glans amputations, reconstructions of the neo-meatus (neo-meatoplasty) were usually done, but in one case who presented few hours after amputation, a non micro-surgical anastomotic glanduloplasty was attempted with failed outcome.

The study has shown that circumcision complications tend to occur more in rural settings, in lower level health facilities, and in older ages at circumcision (this could be due to the age of circumcision in the country). Late referral are seen more in traditional than in medical circumcisers. Urethrocutaneous fistula and glans amputation are the most common complications in our setting and together with meatal stenosis are challenging to manage. Generally patients presents late with severe complications. With the current scalling up of male medical circumcision for prevention of HIV/AIDS special emphasis on safe circumcision is needed so as to reduce circumcision complications.

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