



Complications Associated With Male Neonatal Circumcision Performed By Poorly-Trained Health Professionals and Re-circumcision: Case Series at a Tertiary Hospital

Iyama, AC¹; Aaron, FE¹; Eli, S²; Etawo, US³; Omodu, OJ¹; Tee, GP⁴

Department of Surgery, Rivers State University Teaching Hospital.¹

Mother, Baby and Adolescent Care Global Foundation.²

Department of Surgery, University of Port Harcourt Teaching Hospital.³

Department of Human Physiology, Rivers State University.⁴

ARTICLE INFO

ABSTRACT

Article No.: 100721114

Type: Research

Full Text: [HTML](#); [EPUB](#)

Accepted: 07/11/2021

Published: 15/11/2021

***Corresponding Author**

Dr. Eli S.

E-mail: elisukarime@gmail.com

Keywords: Complications; male neonatal circumcision; re-circumcision; surgeons.

Background: Male circumcision is one of the age old surgical procedures carried out globally. Researchers have identified medical, social and religious benefits of male circumcision. Good surgical technique as well as the competence of the surgeon will help prevent complications following the procedure. However, if this procedure is done by poorly-trained health professionals, it may be associated with complications and some rare cases mortality.

Aim: To determine the complications of neonatal male circumcision performed by poorly-trained health professional and re-circumcision.

Method: This was a 6-year retrospective study of cases of complications following circumcision by poorly-trained health care professionals attended to at the surgical Department of Rivers State University Teaching Hospital (RSUTH) January 1st 2015 to December 31st 2020. The permission for the study was granted by the Head of Department of the Surgery RSUTH. The data was retrieved from the case notes of the patients, including age and presentation, presenting clinical features prior to intervention diagnosis, surgery performed, outcome and duration of follow-up. The data was subject to simple statistical analysis.

Results: Eleven patients met the inclusion criteria. The age range was 7 to 10 days with a modal age of 7 days. All patients were verbally referred. The complications encountered were poorly performed circumcision comprising of redundant foreskin 3 (27.2%) and sustained excessive loss of foreskin 2 (18.2%) ; other complications seen were enterocutaneous fistula 3 (27.2%) sustained amputation of penis 2 (18.2%) and haemorrhage 1 (9.2%). There were no mortalities. All the re-circumcision were performed by surgeons. All the referred cases were performed by nurses. Plastibell were used in 7 (63.6%) cases and traditional methods in 4 (36.4%) of the cases.

Conclusion: The study revealed the commonest complications of circumcision was poorly performed circumcision 46.4%. All the referred case of complicated circumcision were performed by nurses. There is need to create awareness on the complications that may arise from circumcision by poorly trained healthcare givers. Furthermore, nurses should be trained on safe way to perform male circumcision.

INTRODUCTION:

Circumcision is one of the common surgical procedures performed globally.¹

There are myriad of benefits of male circumcision cutting across medical and non-medical benefits including religions, socio-cultural, amongst others.²

Literature has revealed the incidence of complications from circumcision to be between 0.19% and 3.1%.³

Furthermore, the complications of circumcision has been in the increase in the past 16 years.⁴ The complications, from the procedure is common among nurses and traditional attendants when compared to doctors who perform the procedure.⁴

In a study conducted by Okeke et al in South-east Nigeria, the complication rate of male circumcision was 20.2%. This was far higher than the global prevalence of 3.1%.¹ Over half of the complicated cases of circumcision was done to redundant foreskin. The study by Ben Charim J et al in Israel and Yegane et al in Iran supported the study in terms of redundant foreskin as the commonest complications from circumcision.^{1,2} has revealed that neonatal complications are associated with fewer complications when compared to adolescent or adult male circumcision.^{1,2} Due to the high rate of circumcision not many studies are able to differentiate the complications of circumcisions with the different types of circumcision.^{1,2,3} However, the complication rate of neonatal male circumcision could be brought down by organizing training programmes to properly train all health care practitioners on circumcision on available safe methods.

Aim:

To determine the complications of neonatal male circumcision performed by ill-trained health professional and re-circumcision

METHODOLOGY:

This was a 6-year retrospective study of cases of complications following circumcision by ill-trained health care professionals attended to at the surgical Department of Rivers State University Teaching Hospital (RSUTH) January 1st 2015 to December 31st 2020. The permission for the study was granted by the Head of

Department of the Surgery RSUTH. The data was retrieved from the case notes of the patients, including age and presentation, presenting clinical features prior to intervention diagnosis, surgery performed, outcome and duration of follow-up.

The data was subject to simple statistical analysis.

Study Population

This study was conducted in the Rivers State University Teaching Hospital. It is a 370 bed hospital located at Harley Street Port Harcourt Local Government Area of Rivers State, South-South Nigeria. It is a tertiary health institution that provides all levels of health care services to Rivers, Bayelsa, Delta, Imo, Abia and Akwa-Ibom States. The surgical department is one of the clinical departments of the hospital with twelve (13) Consultant Staff.

Inclusion Criteria:

1. Neonates, babies less than or equal to 28 days.
2. Referred from outside RUTH that had complications from circumcision.

Exclusion Criteria:

1. Complications from circumcision after 28 days.
2. Those who had complications from circumcision in the hospital.

RESULTS:

Eleven patients met the inclusion criteria. The age range was 7 to 10 days with a modal age of 7 days. All patients were verbally referred. The complications encountered were poorly performed circumcision comprising of redundant foreskin 3 (27.2%) and sustained excessive loss of foreskin 2 (18.2%); other complications seen were enterocutaneous fistula 3 (27.2%) sustained amputation of penis 2 (18.2%) and haemorrhage 1 (9.2%). There were no mortalities. All the re-circumcision were performed by surgeons. All the referred cases were performed by nurses. Plastibell were used in 7 (63.6%) cases and traditional methods in 4 (36.4%) of the cases.

Table 1

S/N	Complications	No	Frequency (%)
1.	Poorly repaired circumcision Redundant foreskin Sustained excessive loss of skin	3	27.2
2.	Entero-cutaneous fistula	2	18.2
3.	Amputations of penis	3	27.2
4.	Hemorrhage	1	9.2

Table 2: Method of Circumcision

Complications	No	Frequency (%)
Plastibell	7	63.6
Traditional	4	36.4

Table 3

Duration	No	Frequency (%)
7 th day	8	72.7
8 th day	2	18.1
10 th day	1	9.2

DISCUSSION

The study revealed the commonest complications of circumcision to be poorly repaired circumcision contributing to 55.4% table one. This was in agreement with study by Weiss et al and Binyamalet al in Israel.¹⁻⁶ In addition, our study revealed that complications of male circumcision was common when the procedure was performed by nurses and other health care attendants when compared with doctors. These findings were observed by the study done by Okeke et al in Ibadan, Nigeria.⁷ Even though this study did not take into consideration early (intra-operative) complications such as pain and swelling, it doesn't mean these patients never experienced this.^{1,8,9}

In addition, late complications of male circumcision includes the formation of skin bridges between the penile shaft and glans, urinary retention, fistulas, loss of sexual dysfunction and edema of the glans penis were not captured in this study because this study was not a prospective study.^{1,2} Moreover, the inclusion criteria did not capture this. There are myriad of reasons why male circumcision is carried out on neonatal, infants and children cutting across medicine, religion and culture.¹⁻⁴ However, there is paucity of data with respect to the complications associated with the procedure when considering children age groups especially in our environment.^{1,2,4}

Evidence from literature has shown that male circumcision reduces the risk of contracting HIV infection by 60%.^{1,2} For this reasons many countries with high prevalence of HIV infections are now planning to expand access to safe circumcision.^{8,9,12} The World Health Organization (WHO) and the Joint United Nations programmes on HIV/AIDS (UNAIDS) have recommended considering neonatal circumcision in addition to adult circumcision as a longer-term HIV prevention strategy.^{10,11}

Our study revealed that 36.4% of circumcisions done by the nurses was by the traditional method, this is shown in table 2 of our results. This method of neonatal circumcision is not often practiced in developed countries but has more challenges in terms of complications as

well as the time for the procedure to is longer when compared to the use of placebell.^{1-3,7,8,13}

CONFLICT OF INTEREST:

There was no conflict of interest

CONSENT:

All the authors gave their consent for the publication of the manuscript.

ACKNOWLEDGEMENT:

Mother, Baby and Adolescent Care Global Foundation

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