

CIRCUMCISION-RELATED COMPLICATIONS IN THE MALE: EXPERIENCE AMONGST THE IGBO'S OF SOUTHEAST NIGERIA

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Objectives To evaluate male circumcision and the complications associated with it amongst the Igbo people of Southeast Nigeria.

Patients and Methods This study was a prospective review of male circumcision and its complications amongst the Igbo's of Southeast Nigeria carried out over a period of six months. It was conducted in three centers (public, private and a mission hospital) in Anambra State (a core Igbo state) of Nigeria. Circumcision was done after birth at any convenient time, and the babies were followed up at the post natal clinic (six weeks after birth) for possible complications. A questionnaire is usually filled at the time of circumcision and completed at the post natal visit.

Results A total of 141 circumcisions were performed during the study period. Most of the circumcisions (73.8%) were done between 7 and 9 days after birth. The plastic bell

method was used more extensively than the traditional method (68.1% and 31.2%, respectively). The method preferred by the mothers was not statistically different from the method used. The overall complication rate in this study was 24.1%. A higher complication rate was recorded with the use of the traditional method compared to the plastic bell method (43.2% vs. 15.6%, $P < 0.01$), and when circumcision was performed by midwives instead of physicians (30.6% vs. 14.5%, $P < 0.01$).

Conclusion Two factors were responsible for a high complication rate: the use of the traditional method of circumcision and the competence of the performer. It is therefore suggested that circumcision be done by the use of the plastic bell and only by qualified and trained personnel.

Key Words: circumcision, complications, male, Igbo people, Southeast Nigeria

INTRODUCTION

Circumcision in the male is mainly a 'cultural routine' performed in the neonatal period in Igbo-land. A male child is not regarded as a full-fledged male unless this ritual is performed. However, circumcision may also be indicated for other medical¹ or non-medical² reasons.

The caliber of 'surgeons' that perform this operation ranges from the traditional birth attendant (TBA) and the nurse/midwife to a qualified medical doctor. The method also varies with the performer. Circumcision may be done using the traditional method, the plastic bell and the guillotine method.

Despite the fact that male circumcision is an all comers field, few studies have docu-

mented the complications associated with male circumcision^{1,3} as against the barrage of studies dealing with complications of female circumcision^{4,6}.

This study was therefore undertaken to evaluate male circumcision and the complications associated with it amongst the Igbo people of Southeastern Nigeria.

PATIENTS AND METHODS

Southeast Nigeria, the homeland of the Igbo people is made up of five states namely: Abia, Anambra, Ebonyi, Enugu and Imo. One state (Anambra) was randomly selected for this study. In Anambra State, the list of all registered hospitals was obtained from the State

Ministry of Health Awka, and three hospitals were randomly selected to represent public, mission and private hospitals respectively. The selected hospitals were:

1. Public Hospital: Nnamdi Azikiwe University Teaching Hospital (NAUTH), pediatric surgical unit, Nnewi.
2. Mission Hospital: Our Lady of Lourdes Hospital and Maternity, Ihiala.
3. Private Hospital: Life Specialist Hospital and Maternity, Nnewi.

This is a prospective study carried out over a period of six months (from May to October 2001). During this period, all male babies delivered in the three centers whose parents gave consent for circumcision were included in the study.

The babies were circumcised after the umbilical stump had fallen and at the convenience of the parents. A questionnaire is usually filled out after the procedure. The babies are reassessed for possible complications at the post-natal visit (6 weeks post partum) or if they present earlier with any complication. The questionnaire is completed thereafter (see appendix A). Cases of circumcision-related complications performed outside the above mentioned centers but transferred to any of these centers for treatment during the period of the study were included.

In all cases, circumcision was performed without any form of anesthesia. The cost of the procedure was #250.00 to #300.00 for the traditional method and #500.00 to #550.00 for the plastic bell method in all three centers. None of the centers used the guillotine method.

RESULTS

In total, 160 circumcisions were done in the three centers during the study period. 138 (86.3%) patients returned for review of possible complications while three others had the circumcision done outside these centers but presented for management of the complications. This gives a total of 141 babies who completed the study and formed the basis for further analysis.

The results show that 73.8% (104/141) of the patients were circumcised at the age

Table 1: Age at Circumcision

Age (days)	No. of Babies	%
1-3	1	0.7%
4-6	23	16.3%
7-9	104	73.8%
10-12	8	5.7%
13-15	4	2.8%
>15 days	1	0.7%
Total	141	100%

between 7 and 9 days, while only one patient each (0.7%) was circumcised between 1 and 3 days and after 15 days (Table 1).

The plastic bell method of circumcision was used in 68.1% (97/141), the traditional method in 31.2% (44/141). 66% (93/141) of the parents preferred the plastic bell method, 28.4% (40/141) the traditional method and 5.7% (8/141) were undecided (Table 2).

Medical doctors performed 53.9% (76/141) of the circumcisions, while 44.0% (62/141) and 2.1% (3/141) were performed by midwives and TBAs, respectively. Table 3 shows the distribution according to the institution.

The overall complication rate was 24.1% (34/141). Complications were encountered in 43.2% (19/44) and 15.6% (15/97) for the traditional and plastic bell methods, respectively. The complication rates for cases performed by doctors and midwives were 14.5% (11/76) and 30.6% (19/62), respectively (Table 4). The complications encountered were bleeding (8.5%; 12/141), incomplete circumcision (9.9%; 14/141), meatal stenosis (3.5%; 15/141) and urethral laceration (2.1%; 3/141).

DISCUSSION

To have every male child circumcised on the eighth day is a biblical injunction from God⁷. The fact that most of our patients (73.8%) were circumcised between the 7th and 9th day of life may have arisen from this injunction. Some other reasons, such as making sure that the mother leaves the hospital with a

Table 2: Method Used for Circumcision and Method Preferred by the Parents

Method	Private Hospital		Mission Hospital		Public Hospital		Total			
	used	preferred	used	preferred	used	preferred	used	%	preferred	%
Traditional	4	3	25	23	38	32	44	31.2%	40	28.4%
Plastic bell	39	38	10	10	25	27	97	68.8%	93	66.0%
Guillotine	-	-	-	-	-	-	-	-	-	-
None	-	2	-	2	-	4	-	-	8	5.7%
Total	43	43	35	35	63	63	141	100%	141	100%

Table 3: Status of the Personnel Performing the Circumcision

Status	Private Hospital		Mission Hospital		Public Hospital		Total	
	No.	%	No.	%	No.	%	No.	%
Medical doctor	5	11.6%	10	28.6%	61	96.8%	76	53.9%
Nurse / Midwife	37	86.1%	25	71.4%	0	0%	62	44.0%
TBA	1	2.3%	0	0%	2	3.2%	3	2.1%
Total	43	100%	35	100%	63	100%	141	100%

circumcised baby and allowing the umbilical stump to fall may have contributed to the high incidence of circumcision within this age range. Other studies have documented different reasons for circumcision in the neonatal period^{8,9}.

Our analysis shows that the cost of the procedure had an insignificant influence on the choice of the method of circumcision; this can be seen from the minor differences between the method used and that preferred by the parents. The method of choice is largely dependent on the performer and the institution, which is at variance with other studies¹⁰. Most parents in our environment are more interested in having their child circumcised than in the method used.

The status of the performer did not affect the particular number of circumcisions done at any center. This rather is a reflection of the

number of deliveries done at that center as mothers are not likely to go to another center for circumcision. They always want to leave their place of delivery with a fully circumcised male child if they happen to be blessed with such.

Our results clearly show that the center determines the status of the performer. In a public hospital like Nnamdi Azikiwe University Teaching Hospital, medical doctors carry out all surgical procedures including circumcision. However, in our private and mission hospitals - because of the lack of medical personnel and the quest to maximize profit - nurses and midwives are trained and allowed to perform such procedures as circumcision. Only three cases in our series were done by a TBA - all of them came in with complications. This study did not incorporate a center run by a TBA, and since most mothers will have their child circumcised

Table 4: Circumcision-Related Complications Encountered

Complication	Method Used		Status of Performer			Total	
	traditional	plastic bell	doctor	midwife	TBA	No.	%
Bleeding	10	1	3	7	1	11	7.8%
Incomplete circumcision	6	8	6	7	1	14	9.9%
Urethral fistula (ventral tear)	2	1	0	2	1	3	2.1%
Meatal stenosis	0	5	2	3	0	5	3.5%
Amputation of penile shaft	0	0	0	0	0	0	
None	26	82	65	43	0	108	76.6%
Total	44	97	76	62	3	141	100%

at their birth center, it then reflects a low rate of serious complications beyond what the TBAs can handle.

A complication rate of 24.1% is definitely high for a simple procedure like circumcision when compared with other studies^{3,9,11}. This high complication rate was influenced by the method used, the status of the performer and the center. The complication rate was higher with the traditional method compared to the plastic bell method. The TBA had the highest complication rate while the doctor had the lowest rate. The complication rate even among doctors was highest in the mission hospital (90.0%) and low in the private (20.0%) and public (1.6%) hospitals. This is a reflection of the level of training of the doctors and also the level of supervision. In mission hospitals only complicated circumcisions are referred to the doctor; this considerably influences the complication rate.

In conclusion, the complication rate for circumcision in our environment is high, and this is due to two factors: the use of the traditional method of circumcision and the incompetence of the performer. The establishment of a training program for doctors and midwives on how to perform circumcision using the plastic bell method could achieve a reduction in the complication rate. Selected personnel should receive a specialized training within a workshop and should later be sent to designated centers in the state to teach the local staff. At the same time, mothers should be educated during the

antenatal period to have their babies circumcised in a certified center.

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APPENDIX A

QUESTIONNAIRE

CIRCUMCISION-RELATED COMPLICATIONS IN THE MALE

TICK OF FILL AS APPROPRIATE

1. Age of Child Age at Circumcision

2. Method of Circumcision:

a. traditional b. plastic bell c. guillotine

3. Preference of parents if given the opportunity to choose:

a. traditional b. plastic bell c. guillotine

4. Cost of procedure:

a. traditional b. plastic bell c. guillotine

5. Who performed the circumcision:

a. doctor b. midwife c. tradition birth attendant

6. Facility used for the circumcision:

a. hospital
(private/mission/govt) b. maternity home c. traditional setting

7. Complications:

a. bleeding b. amputation of shaft c. incomplete circumcision

d. fistula e. angulation of shaft f. meatal stenosis

h. others

i. ll.

iii. IV.

8. Comments

RESUME

Complications de la circoncision chez l'homme: Expérience chez les IGBO du Nigeria du sud-est

Objectifs: Etude prospective des circoncisions chez l'homme et ses complications dans la région d'Igbo du Nigeria du sud-est. **Patients et Méthodes:** L'étude a été conduite dans trois centres (public, privé et un hôpital de la mission) dans Anambra State (au centre de l'état d'Igbo) du Nigeria pendant une période de 6 mois. La circoncision a été réalisée après la naissance, et les bébés ont été suivis dans la clinique post-natale pour les complications possibles, six semaines après la naissance. Un questionnaire est rempli habituellement lors de la circoncision et est complété pendant la visite post-natale. **Résultats:** Un total de 141 circoncisions a été réalisé pendant la période de l'étude. La plupart des circoncisions (73.8%) a été faite entre 7 et 9 jours après la naissance. La méthode la plus utilisée est celle de la cloche plastique (68.1%) par rapport à la méthode traditionnelle (31.2%). La méthode préférée par les mères n'était pas statistiquement différente de la méthode utilisée. Le taux de complications total dans cette étude était de 24.1%. Un taux de complications plus important a été enregistré avec la méthode traditionnelle comparé à celle de la cloche plastique (43.2% contre 15.6%; $P < 0.01$), de même pour les circoncisions réalisées par les accoucheuses comparées aux docteurs (30.6% contre 14.5%, $P < 0.01$). Deux facteurs étaient responsables de ce taux important de complications: l'usage de la méthode traditionnelle de circoncision et la compétence du praticien. **Conclusions:** Il est par conséquent suggéré que cette circoncision soit réalisée par la cloche plastique et seulement par un personnel compétent.

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