



Plastibell Circumcision in a Private Family Practice in Benin City Nigeria

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Authors' contributions

This work was carried out in collaboration between both authors. Author GY carried out the surgeries, collated the data and developed the concept. Author SUO designed the study, wrote the first draft, managed the literature searches, analysed the data and reviewed the manuscript. Both authors read and approved the final manuscript.

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ABSTRACT

Background: Circumcision is a common practice in Nigeria and in the Niger Delta region is mostly done as a cultural and religious practice. The procedure is increasingly, commonly being offered in hospitals and carried out by trained doctors and surgeons. It has been shown that being done in the hospital offers a way for mitigating the incidence of operative complications many of which would require specialists care in their management. There is a higher incidence of complications when done by untrained hands.

Materials and Methods: This is a retrospective review of 75 babies circumcised using Plastibell at a private family practice in Benin City Nigeria over a 3 year period from 2011-2014.

Results: A total of 78 babies were seen in the period under review with a mean age of 11 +/- 5.4 days. The modal plastibell size was 1.3 cm, 52.6% of all the babies had 1.3 cm plastibell size with a range of 1.1 – 1.5 cm. The complication rate was 11.5% (9 babies) with haemorrhage, ring retraction and redundant skin as the complications seen. The mean age of the babies that had

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haemorrhage was lower than those without, however this was not statistically significant. Parent satisfaction was 88%.

Conclusion: Circumcision is a procedure that can be safely domiciled in a family practice. Proper training for the procedure that result in and its use encouraged.

Keywords: Plastibell; circumcision; family practice; Nigeria.

1. INTRODUCTION

Circumcision is a common practice in Nigeria and in the Niger Delta region is mostly done as a cultural and religious practice [1]. The practice of circumcision is quite ancient, at least 15,000 years ago [1,2]. The first recorded importance of this act was the covenant between God and Abraham when the later was circumcised at the age of 99. All over the world, circumcision is done by the majority either as a religious or cultural obligation, as a result it has become the most common surgical procedure done in children globally [3]. Culture has been attributed as the main reason for circumcision and it is usually done within the first week of the male infants' birth [1-3]. Delays are usually from situations of illness in baby or mother and or access to the place of circumcision [2-4]. Ekwunife et al showed that mothers in Enugu preferred the procedure being done on the 8th day. The procedure was generally done by TBA and other community based tradomedical practitioners-usually families who have passed the trade down through generations [5,6]. The procedure is increasingly, commonly being offered in hospitals and carried out by trained doctors and surgeons [1,2,4]. It has been shown that being done in the hospital offers a way for mitigating the incidence of operative complications many of which would require specialists care in their management. There is a higher incidence of complications when done by untrained hands [5,6]. Complications that have been identified include, hypospadias, glandular amputation, sepsis, urethral stricture, redundant skin etc [5-7]. Having the procedure done in a hospital setting also allows proper medical examination and identification of congenital defects that would mean either delay or modification of circumcision.

Plastibell is increasingly being preferred by parents due to the perceived lower incidence of complications associated with its use as well as the ease of circumcision using the device [8,9]. A number of circumcision is being carried out by non paediatric surgeons in private clinics, this may need to be studied to demonstrate if this

practice is safe [8-10]. The aim is to evaluate the outcome of plastibell circumcision and its safety in family medicine practice. This study was undertaken to audit our practice of using plastibell for circumcision in a private family practice in Benin City Nigeria.

2. MATERIALS AND METHODS

This is a retrospective review of 75 babies circumcised using Plastibell at a private family practice in Benin City Nigeria over a 3 year period from 2011-2014. All patients clinical records were retrieved and age at circumcision, type and size of plastibell used, early and late complications including patient satisfaction were noted. The data was entered into spreadsheets and analysed using SPSS 21 and the results presented in tables and graphs.

2.1 Babies with Incomplete Data were Excluded from the Study

The procedure were all carried out by the Family Physician in the Theatre under full aseptic protocol. An appropriate sized plastibell was obtained with a circumcision pack. The baby was placed supine and restrained by a Nurse. The penis was cleaned with chlorhexidine in water and draped. The prepuce was held at 3 and 9 o'clock positions and penile block done using 1% lignocaine. The prepuce was gently separated from the glans by means of a haemostat taking down any adhesions. The appropriate plastibell size was selected by testing the device over the exposed glans penis. The prepuce was clamped at the 12 o'clock position for 10seconds then slit with a scissors and retracted. The urethral opening was identified. The plastibell was then inserted over the glans and the prepuceal skin pulled over the device and clamped with a haemostat over the handle to stabilize it. The ligature is then tied apposing the prepuceal skin on the device and the excess skin cut just distal to the edge of the device. Haemostasis was secured and the area cleaned. The baby is subsequently returned to the mother for pacification with breastfeeding. The procedure lasts between 5-10 mins. The mothers were told

the device would fall off within 2-4 days. They were advised to watch out for any complications and immediately return if there were any complications or following failure of the device to fall off.

Ethical approval was obtained from the Ethics Committee of the Delta State University Teaching Hospital, Oghara.

3. RESULTS

A total of 78 babies were seen in the period under review with a mean age of 11 +/- 5.4 days Fig. 1.

The modal plastibell size was 1.3 cm, 52.6% of all the babies had 1.3 cm plastibell size with a range of 1.1 – 1.5 cm Fig. 2.

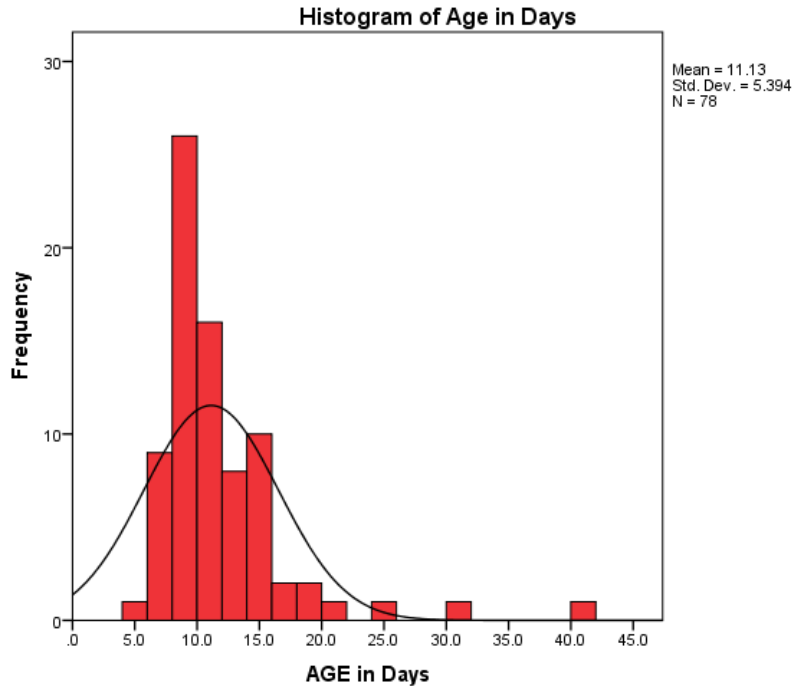


Fig. 1. Showing histogram of age of the babies

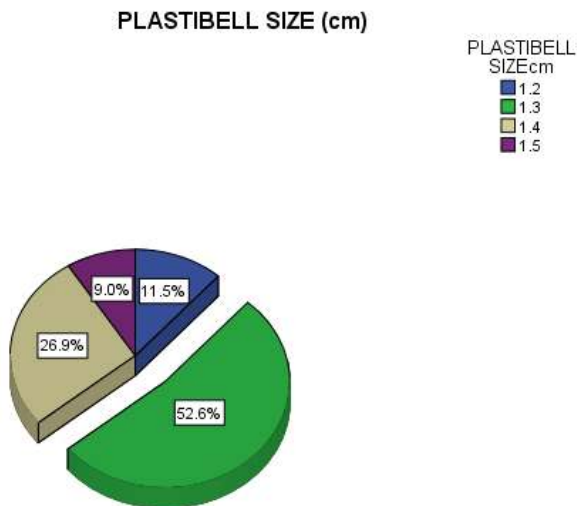


Fig. 2. Shows the plastibell sizes used

Table 1. Shows the outcome following the procedure

Outcome		Plastibell size (cm)	Age (days)
Haemorrhage	Mean	1.333	8.333
	Number	3	3
	Std. deviation	.0577	3.5119
	Minimum	1.3	5.0
	Maximum	1.4	12.0
	% of total number	3.8%	3.8%
Redundant skin	Mean	1.400	15.333
	Number	3	3
	Std. deviation	.1000	12.7017
	Minimum	1.3	8.0
	Maximum	1.5	30.0
	% of total number	3.8%	3.8%
Retracted ring	Mean	1.300	10.667
	Number	3	3
	Std. deviation	.0000	3.0551
	Minimum	1.3	8.0
	Maximum	1.3	14.0
	% of total number	3.8%	3.8%
Satisfactory	Mean	1.332	11.087
	Number	69	69
	Std. deviation	.0813	5.1414
	Minimum	1.2	7.0
	Maximum	1.5	41.0
	% of Total number	88.5%	88.5%
Total	Mean	1.333	11.128
	Number	78	78
	Std. deviation	.0800	5.3945
	Minimum	1.2	5.0
	Maximum	1.5	41.0
	% of total number	100.0%	100.0%

The complication rate was 11.5% (9babies) with haemorrhage, ring retraction and redundant skin as the complications seen above Table 1.

The mean age of the babies that had haemorrhage was lower than those without, however this was not statistically significant. Parent satisfaction was 88% Table 1.

4. DISCUSSION

The mean age of the babies was 11days which correlates well with other studies done in Nigeria and Africa. The general cultural practice being from the 8th day of life. Earlier practice is practically unknown and generally condemned as

the baby is usually named at the 7th or 8th day of life and then presented outside the family. Some communities are known to perform circumcision at much older age where it is done as rite of passage into maturity.

The commonest size used in our practice was 1.3 and this correlates well with other studies in Nigeria and Africa which showed sizes 1.3 and 1.4 as the commonest in their practice. This size is that fitted for neonates. Choosing an appropriate size is important in preventing complications. Too small a size may lead to slipping and subsequent haemorrhage, proximal migration into the glans leading to swelling,

urethral obstruction, cellulitis and urethral fistula formation [8,9]. Too large a size may lead to penile denudation [8]. Moosa FA et al. [11] demonstrated a complication rate of 4.44% in neonates and a much higher rate of 20% for infants. This is much higher than our observed rates with the patients having the same range of complications. Mousavi SA et al. [12] showed that plastibell had a significant higher incidence of complication than the conventional dissection method. However the study had a complication rate nearer that from our study. However, other studies [13] showed that the use of plastibell resulted in smaller complication rates [14], with complication less with younger neonates and infants. Retraction of the ring is a serious complication that needs urgent intervention. Removal of the ring may be difficult, but operative manipulation is always indicated [15].

Parents' satisfaction was fair at 88.5% with a low incidence of complication. This compares to other studies done in Africa [2,4,7,8,16]. Haemorrhage amenable to pressure application, retraction of the device and redundant prepuce occurred in 3.3% of cases respectively. This is both an attestation of the skill of the surgeon and the appropriate sizes of the device used. These complications were easily addressed to the satisfaction of the parents following prompt presentation at the clinic. Domiciling this procedure in a family health practice here shows good promise and low rate of complications. The procedure can be easily mastered and taught and practiced safely [11].

Retraction was noticed at the modal size of 1.3 though the babies appeared older. This was due to the use of a small device. Though retraction has been reported to lead to sepsis and cellulitis, yet none was seen in this study as patients presented early and had manual removal of the device. This demonstrates that appropriate counselling of parents is essential with clear directives [5,6]. Our parents were instructed to come immediately if swellings, bleeding or any untoward changes are noted [2,4,8].

Redundant prepuce is cosmetically unsightly to many mothers. In our study only a small percent had it. It was easily treated by refashioning of the redundant skin.

5. CONCLUSION

Circumcision is a procedure that can be safely domiciled in a family practice. Proper training for

the procedure that result in and its use encouraged.

CONSENT

Consent was obtained for this retrospective work from the ethical board of DELSUTH Oghara.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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