"PLASTIBELL CIRCUMCISION TECHNIQUE: EXPERIENCE IN DOCTOR'S SONS"

Muhammad Uzair[1], Riaz Ahmed Khan Afridi[2], Zafar[3], Mussarat Hussain[4], Munir Ahmad[5], Muhammad Fayaz[6], Asif Ahmad[6]

ABSTRACT

Objective: To determine the outcome of plastibell circumcision technique in sons of doctor community.

Materials and methods: 30 consecutive children of doctors community who underwent plastibell circumcision in Private medical centre in Peshawar, Pakistan over a period of 1 year were retrospectively reviewed .All children of age ranging from 7days to 1 year of age were included. The record of all the cases fulfilling the inclusion criteria were obtained and analyzed for determining the outcome and complications if any.

Results: A total of 30 children fulfilling inclusion criteria of the study were studied. Mean age was 6 months. No major complications noted during study period. Pain was the main complaint noted by parents in all the cases ,followed by minor skin infection in 7boys(23%),urinary retention in one case(3.33%),bleeding in 2 boys (6.66%).1.4 size plastibell was most commonly used .Delayed separation of the ring was noted in 4 boys(13.3%).Mean operative time noted was 9.5 minutes . No conversion to formal circumcision noted and cosmetic appearance was acceptable to all the parents.

Conclusion: Plastibell circumcision is a safe technique in experienced hands. Most of the doctors recommend this technique for their son's circumcision because it is performed with local anesthesia, quick, safe and easy to perform. Outcome of this procedure is encouraging.

Keywords: Plastibell, circumcision, circumcision technique

INTRODUCTION

Circumcision is one of the most common surgical procedures performed worldwide with approximately one in three males circumcised globally[1]. The practice of circumcision is thought to be at least 15,000 years old. Cave drawings dated to Paleolithic age show illustrations of circumcised men. There are reports of royal mummies who were circumcised.

The role of circumcision owes its origin from the circumcision of Abraham when he was circumcised at age of 99 years as a covenant with God. Muslim tradition dates the ritual to the circumcision of Ishmael, Abraham's eldest son who was circumcised at age of 13 years with his father[2]. The three most common devices used to date are the Gomco clamp, the Plastibell device and the Mogen clamp.

[1] Department of Paediatric Surgery, Gajju Khan Medical College Swabi
[2] Department of Plastic Surgery Nowshera Medical College Nowshera
[3] Department of Urology, Gajju Khan Medical College Swabi
[4] Department of Surgery LRH Peshawar
[5] Department of Surgery KTH Peshawar
[6] Department of Paeds Surgery LRH Peshawar

Address for Correspondence:
Dr. Muhammad Uzair
Assistant professor Gajju khan Medical college Swabi
Cell No.03459087189
E.mail: uzair.shinwari@gmail.com

The Plastibell Circumcision device, invented by Hollister in 1950 is a clear plastic ring with handle designed for male circumcision. The ring has a deep groove running circumferentially. Despite its simplicity, the use of correctly sized bells, meticulous aseptic techniques, securely tied ligatures and close postoperative follow-up are essential to minimize the development of postoperative complications.[3]

The plastibell ring device is available in sizes ranging from 1.1cm to 1.7cm and is correlated to the size of the glans of penis. An appropriate bell size which snugly fits in 2/3 of the glans should be used along with the thread that is tight enough to cause ischemia of the foreskin. If the thread is not securely tightened or if the skin is too thick as in older children, it will result in incomplete/delayed separation of the ring. Smaller bell size will results in tissue necrosis and larger bell can migrate proximally and get impacted[4].

The rationale of this study was to determine the effectiveness and complications of plastibell circumcision technique in sons of doctors community who were the primary referee of this procedure for their sons keeping in view of avoidance of general anesthesisa, quick, safe and easy procedure to perform with least number of complications.

MATERIALS AND METHODS

This retrospective descriptive study included 30 neonates and infants who underwent Plastibell circumcision from April 2013 to November 2014. All these

patients were the sons of doctor's community. Records of all patients who had congenital abnormalities like hypospadias, deep jaundice, de-ranged coagulation profile, extensive skin nappy rash, small size penis and any other medical illnesses were excluded. A policy of preoperative genital examination, consent-taking and full explanation to the parents is used. All patients were operated by two surgeons.

Surgical technique

Lignocaine 1% was given as a penile/ring block. At first the foreskin was separated from the glans penis by blunt forceps, any adhesions between the foreskin and glans penis were separated and all visible smegma was removed with saline moist gauze. Marking was drawn 2 to 3 mm proximal to the shadow of coronal sulcus. Then a dorsal slit was made until the corona become visible. An appropriate size of Plastibell was then placed on the glans and the foreskin brought over it.

Determining the appropriate size of the device used was very important. Too small size can cause tissue strangulation, and too wide one may result in too much foreskin being removed and penile denudation. The Plastibell size is selected by observational estimate of the glans penis girth. Commonly the Plastibell comes in seven sizes. Selection of the proper size gets better with practice and experience. The tie is applied on the Plastibell groove using a surgeon's knot for the first throw. The foreskin is excised just past the outermost edge of the Plastibell taking care not to damage the glans. Final checking for bleeding, meatal opening and correct position of the tie was performed at the end of the procedure.

The parents were advised to watch for complications and strongly encouraged to come back to the hospital in case of any problems. The ring is expected to fall off in 5–7 days, completing the process of circumcision. Follow up schedule was at 10th day and 1month post operative for any complication and cosmetic results. Statistical analysis was done by SPSS version 20.

RESULTS

A Total of 30 patients fulfilling the inclusion criteria were enrolled in the study. 12(40%) neonates and 18(60%) infants were circumcised by this technique. Mean age was 6 months+14 days. Different specialty doctors who refer their sons for plastibell circumcision are given in table 1.

Postoperative Pain was the main complaint noted by parents in all the cases that was managed by oral paracetamol for 24 -48 hours, skin infection in 3boys (10%) which was treated by oral antibiotics and topical application of polyfax skin ointment. Bleeding during and after the procedure was noted in 2 infants (6.66%) which was stopped with local compression. Delayed separation of the ring was noted in 4 boys(13.3%) on

Tab.1

No	Doctor's Speciality	No of children circumcised
1	Paeds physicians	7
2	General physicians	5
3	Maxilofacial surgeon	1
4	Orthopeadic Surgeon	1
5	Pulmonologist	2
6	Cardiologist	1
7	Residents in different specialities	13

Tab.2

No	Complications	No Of Cases
1	Skin infection	3(10%)
2	Bleeding	2(6.66%)
3	Delayed Separation	4(13.3%)
4	Urinary Retention	1(3.33%)

10th post operative day, none of these cases required surgical removel.Urinary retention was noted in one child(3.33%) for 6 hours which was relieved by parental counseling, oral analgesic and by gentle suprapubic massage .

The time taken by the procedure was ranging from 7-16 minutes and mean operative time was 9.5 minutes. All parents were satisfied with the cosmetic appearance of the penis. No major complications noted in all cases that required any major surgical intervention, hospital admissions or any blood transfusion.

DISCUSSION

The technique of Plastibell circumcision has established itself as an acceptable form of circumcision particularly in neonates to one year old infants. Complications with this technique are reported to be 2% to 3%.[5,6,7]. Delayed separation of the plastibell was the most frequent complication noted by Moosa AF et al, and Marwat AA et al which showed a delayed separation of the ring in 6.93% and 14.6% respectively[7,8]. Our study showed delayed separation of the ring in 13.3% of the cases which is comparable with the local studies but in our study no surgical intervention was needed for ring retrieval and in all 4 cases ring was spontaneously fell down.

One of the commonest complications of cultural circumcisions is bleeding and rates as high as 35% have been quoted in the literature[9]. Outcomes from Plastibell circumcisions are reported to be better although bleeding is still a significant problem[10]. Bleeding occurs in 3–10% of cases in reported series[11] In current study we observed bleeding during and after procedure in 6.66%.

Bleeding stopped in all the cases by tight compression dressing and no blood transfusion, hospital admission or active surgical intervention needed. Our results are comparable with local and international studies[4,8,11]

Though our study sample represent a small sample size of only doctors community sons, all of the parents were either specialists doctors or as residents in different surgical and medical allied fields. They were the keen observer of the plastibell circumcision on daily basis and reported even a minor complication on telephone to the primary authors, all such complications were managed by simple telephonic guidance from the authors by the parents. To our knowledge by searching the literature no such study presenting the outcome of plastibell circumcision in doctors sons were reported yet.

CONCLUSION

Plastibell circumcision is a novel technique for childhood circumcision. It is a safe, easy and quickly performed procedure with minimum complication rate, which can be performed under local anesthesia. The authenticity of the procedure can be appreciated that most of the medical doctors from different specialties recommend this procedure for their sons circumcisions.

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