Plastibell Circumcision - Our Experience

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Abstract

Background: Circumcision of male children is a common elective surgical intervention in Pakistani Muslim populations. Conventional surgical methods with open technique and with bone cutter device were practiced since decades. Presently circumcision with plastibell device is the most frequent method employed in our country. The objective of this study was to report our experience of circumcision with plastibell method in Pakistani neonates, infants and children up to 4 years age.

Methodology: It was prospective study conducted on 542 cases of circumcision via plastibell from June 2010 to December 2014. Age ranges from 7 days to 4 years. Babies with bleeding disorders and premature births were excluded. All cases were followed for 1 month to note the complications and final outcomes.
Results: 542 cases underwent plastibell circumcision as a day case procedure. Out of total, 191 (35.23%) were neonates, 256 (47.23%) were infants and 86 (15.86%) were children between 1 to 4 years of age. Out of total 46 cases had a minor complication. The most frequent complication was delayed separation of the ring.

Conclusion: Plastibell device circumcision is a safe and easy procedure for circumcision in neonates, infants and children up to 4 years.

Keywords: Circumcision, Plastibell method, postoperative complications.

Introduction:
Circumcision is a commonest elective surgical procedure performed in Pakistan. Pakistan being a second largest Muslim country, where most of the Muslim neonatal Male gets circumcision performed on 7th day of their birth due to their religious believes. Since long time it was performed by non-technical barbers in Pakistan. Still the commonest practice for circumcision is performed through bone cutter method and open technique. Presently Plastibell is a popular OPD method of circumcision among Pakistani Male Children’s, as it is safe with fewer complication and does not need anesthesia. Reported complications include bleeding, infections and technical problems after the application of the plastibell. We reported our experience of postoperative complication of plastibell circumcision in Pakistani male neonates, infants and children’s.

Methodology:
A retrospective study carried in neonates, infants & children of 4 years who underwent plastibell circumcision at a private hospital of Hyderabad city during 5 years period from June 2010 to December 2014.

All cases were examined pre-operatively and size of the ring selected. All neonates’ infants or children with evaluated BT CT & if jaundiced post delivery were investigated for LFT, PT & APTT.
Children with hypospadias, thalassemics, hemophilic and deranged coagulation profile were excluded from the study.

**Result:**

During the study period of 5 years from Jan 2010 to Dec 2014, 542 cases of Plastibell circumcision fulfilled the inclusion criteria. Out of total, 191 (35.23%) were neonates, 256 (47.23%) were infants and 86 (15.86%) were children between 1 to 4 years of age. Mean age was 14 ± 2 days.

Out of the total 542 cases, the success rate of plastibell circumcision without complications was recorded in 496 (91.5%) cases. The remaining 46 (8.4%) cases developed minimum complications. In neonates out of 191 cases, only 06 (3.14%) developed complications. The most common complications were delayed separation of Ring, recorded in 04 cases (2.09%). In infants & children 1-4 years postoperative complications were recorded in 40 cases (11%). The most common complication was again delayed separation of the Ring.

In 542 cases delayed separation of ring was the commonest, recorded in 27 (58.68%) cases. Other complications included bleeding in 12 (26.08%) cases, localized superficial infection in 7 (15.21%) cases.

**Discussion:**

The technique of plastibell circumcision is an acceptable form of circumcision in neonates, infants and children up to 4 years of age.

Overall postoperative complications rate of the circumcision via plastibell device is ranges between 3-17% Manji et al reports a complication rate between 17.6 to 17.8%. However, Dunean et al reported a high complications rate of 20.2%. Fraser et al concluded that circumcision plastibell via device is a safe method in children.

The commonest complications reported were bleeding and local infection. Other reported complications include, dysuria, inadequate skin removal & excessive loss of skin. Technical issue related to ring includes, impactions, delayed or incomplete separations of ring, proximal
slippage with penile shaft or glans herniation\textsuperscript{13}. Lazarus J reported unusual complications of necrotizing fasciitis, urinary retention and ischemic necrosis of the glans\textsuperscript{7,14}.

We observed delayed separations of ring, bleeding, localized superficial infections, and proximal migrations of ring and dysuria as the frequent complications in our study.

The average rate of occurrence of complications in our study was 3.5\% compared to other studies.

The ring usually falls off within 10 days of the procedure\textsuperscript{15}. It is faster in neonates compared to infants due to thin prepuce\textsuperscript{16}. It is observed in 6\% cases in our study. These cases are managed by cutting the ties knot or gently cutting the attached ring through the sloughed areas\textsuperscript{17}.

In our study only 2\% cases were reported with proximal migrations of ring and were removed manually. It results from a large ring with excessive foreskin is removed with penile denudations. It can slip or migrate proximally and get imbedded on the glans with herniation of the glans\textsuperscript{18}. Small size ring can also get impacted on the glans and can result in tissue strangulation and necrosis\textsuperscript{19}. This can be prevented by selecting appropriate size of the ring which can snugly fits in 2/3 of the glans\textsuperscript{20}.

Circumcision performed in the neonates had better results with few complications in comparison of infants \& children up to 4 years age\textsuperscript{20}. The reason being a thin and soft skin which comes off early causing minimal complications in neonates also reported in other studies\textsuperscript{21}. Our study also confirms the above fact.

In our setup, circumcision has being performed for a long period with blind bone cutter technique which results in trauma to glans and partial complications of glans. It should be discouraged with the availability of safe technique of plastibell.

**Conclusion:**

Plastibell circumcision is an easy, quick and safe technique with fewer complications rates if performed correctly. It is not only recommended in neonates but also in infants and children up to 4 years as it results in fewer complications.
Reference:


