Determinants of the time of ring fall-off in plastibell circumcision: a systematic review

Quadri Sanni and Mufutau Bioku
South Warwickshire NHS Foundation Trust, UK


Abstract

Background: Circumcision, a common surgical operation involving the removal of the foreskin for religious, cultural, and medical reasons, is one of the oldest surgical procedures. Delay in plastibell ring fall-off causes unacceptable sequelae such as penile necrosis, amputation, anxiety to the carers. Several studies have documented the time of fall of plastibell ring; however, there is a dearth of systematic review on the factors that influence the time of ring fall-off.

Aim: In addition to determining the complication of plastibell circumcision, this review aimed to analyse the factors determining the time of ring fall off and how they correlate to the timing of fall off.

Methodology: Data was collected from PubMed, EMBASE, and Scopus databases using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines.

Results: The younger infants have an earlier average fall time with 7 days and 9 days for 3 months and 8 months old infants respectively. Use of a sitz bath ensures an average fall-off time of 7 days compared to 9 days if the sitz bath was not used. Polypropylene has a shorter fall-off time than cotton and a smaller plastibell thread size causes earlier fall-off. Ring retention and bleeding were the commonest complications with 25.8 and 17.1% occurrence respectively.

Recommendations: There is need to design algorithms consisting of a combination of these factors affecting the time of plastibell ring fall-off in order ensure the earliest possible time of fall-off.

Conclusion: Conclusively, the study showed that the plastibell ring falls off earlier for younger infants, with the use of sitz bath, and in case of a smaller plastibell thread.

Keywords: circumcision; urology; plastibell; ring fall-off

References


