

Life-Threatening Bleeding Following Plastibell™ Circumcision Due To A Faulty Technique

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Abstract

This is a case report about a life-threatening bleeding following a Plastibell™ circumcision due to a faulty technique. Too much trimming of the foreskin left behind insufficient skin stump to hold the ligature in place, causing the slipping of the ligature tie, loss of the compression and uncontrolled bleeding.

Case Presentation

A 3-month-old boy was brought by his parents to the Accidents and Emergency department in a district hospital because of a non-stop bleeding about one hour following a Plastibell™ circumcision at a local GP surgery earlier. The initial assessment was immediately followed by fluid resuscitation and blood transfusion. The blood-soaked dressing was still in place covering the Plastibell™ ring. Compression of the wound failed to control the bleeding because the ring was still in place, and a specialist consultation was sought. Once the dressing

and ring were removed, the spurting Frenular arteriole was exposed and controlled with a 4/0 absorbable stitches. A sterile compression dressing was applied, and the child was admitted for observation overnight, and was discharged home next day. A follow up visit four weeks later showed complete wound healing.

Discussion

The Plastibell™ (Ross style) technique is widely used around the world, and has been shown to be acceptable and practical in developing countries [1]. Out of various techniques available for circumcision, Plastibell™ Device (PD) method has now become the method of choice in children less than one year of age in the modern world [2]. The 2008 WHO/UNAIDS report about Male Circumcision, concluded that neonatal circumcision has a very low rate of adverse events, which are usually minor (0.2–0.4%) [3]. A number of studies proposed that circumcision with

PD is a safe and simple method, and that complications including haemorrhage, local infection, sepsis, meatal ulceration, and poor cosmetic results are rare especially in the neonatal period [4,5]. In a large multi-centre study, Jimoh BM et al reported the outcome of a total of 2,276 infants who had classical PD circumcision, with the age ranging from 4 days to 3 months (mean age of 17 days). The overall complication rate was 1.1% (n=25) with postoperative bleeding in 0.5% (n=12) only [6]. Another study reported the outcome of PD circumcision in 1,129 children, with bleeding documented in 3% of cases [7]. Such a complication may be reduced by carefully performed technique [8], the choice of the appropriate PD size, sufficiently tied ligature [9], and leaving sufficient stump of foreskin distal to the ligature tie [10]. The wound will contract, and, if the tissue is excised too close to the ligature, haematomas and bleeding can result [10]. Bleeding usually arises from the frenulum; however, as the Frenular vessels are hidden inside the Plastibell™, the site of the bleeding is unclear, and external compression is ineffective [11].

Although cutting the foreskin flush is a standard part of the circumcision procedure with the Gumco clamp, Mogan clamp or a bone cutter, it should be strongly discouraged when using the PD, as this will allow premature slipping of the ligature, loss of compression, and bleeding. In the PD technique, the mechanism of circumcision is directly related to the ischemia and pressure necrosis created by the ligature tie. The final circumcision line will be the circumferential line created by necrosis at the level of the tie, and any skin distal to it would ultimately necrose and sloughs off. In his original description of the tourniquet technique, Dr Ross did not advocate removing the skin distal to the ligature. In fact, the foreskin is still left in place after applying the ligature by some providers of the service in USA and Nigeria. Which approach is better, has never been studied [10], but even with the trimming of the foreskin at the end of the procedure, enough skin stump should be left behind as demonstrated in the attached photo (Figure 1).



Figure 1: Post PD circumcision with adequate skin stump (arrows).

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