

Circumcision or Preputialplasty in Children with Phimosis: What is the Evidence?

Pan P*

Department of Pediatric Surgery, Ashish Hospital and Research Centre, Jabalpur, Madhya Pradesh, India

***Corresponding author:** Pradyumna Pan, Pediatric Surgery Unit, Ashish Hospital and Research Centre, Jabalpur, Madhya Pradesh, India 482 001, India. E-mail: dr_pan@rediffmail.com

Received: May 14, 2020

Published: June 10, 2020

Short Communication

Circumcision is one of the oldest and undoubtedly one of the world's most common surgical procedures. The circumcision is done for religious, ritual and cultural reasons. The common medical indications for circumcision include phimosis, paraphimosis, trauma, recurrent skin infections and lesions. Embryologically the prepuce appears as a ring of thickened epidermis within the fetus penis at eight weeks, which develops from the coronal sulcus and proceed towards the tip of the glans by 16 weeks [1]. At this stage, the epidermis of the deep surface of the prepuce and the epidermis of the glans is fused. The preputial space is formed by process of desquamation [2]. The squamous cells assemble into whorls, creating nests of epithelial cells. The centres of these degenerate, thereby forming a sequence of spaces. Progressively they join up, as they increase in size until a continuous preputial space is finally created. At the time of birth, the prepuce is still forming and incomplete separation renders it non-retractable. This natural tightness of prepuce is misdiagnosed as phimosis. It is merely a typical evolutionary period. Some boys present with preputial ballooning. It is due to collection of urine between prepuce and glans where prepuce's inner layer has separated from the glans but the prepuce is not completely retractable. Ballooning is a temporary phenomenon. Babu et al found no interference in voiding due to ballooning and is not an indication for circumcision [3]. Physiologic phimosis is the rule in newborn males due to flimsy adhesions between glans and prepuce. The adhesion to glans and prepuce separates over time reducing to 50% at the age of two and to 8 % by seven years. This incidence is reduced to 1% by eighteen years [1, 4]. According to Wright, in infancy and early childhood, the prepuce is intended to be non-retractable when developing glans need protection from mechanical injury due to clothing and chemical trauma of ammoniac urine [5]. The physiological role of a foreskin is being acknowledged progressively bringing several alternative techniques in use to treat phimosis. It undoubtedly protects the sensitive glans, provides lubrication and allows greater freedom of movement during sexual intercourse [6]. Enthusiastic efforts to retract the foreskin in physiological phimosis causes micro tears, infection, and

bleeding with secondary scarring. Poor hygiene and recurrent balanoposthitis lead to the development of true phimosis [7]. Pathological phimosis is a quite rare condition marked as a whitish ring of hardened tissue on the tip of prepuce. Currently, surgery of phimosis is conducted through two types of procedures: a) circumcision and b) preputialplasty. In children with phimosis, preputialplasty represents a surgical alternative to time honoured circumcision, which is associated with many functional and physiologic complications, trouble, and risks [8, 9]. Complications like hemorrhage, edema, infection, meatal stenosis, urethral fistulae, unsightly scars, penile curvature, shortness of shaft skin, and partial, or total penile loss all being noted after circumcision [10]. Preputialplasty is a conservative surgical technique as compared to classical circumcision for the treatment of phimosis. Preputialplasty broadens the preputial meatus to permit its simple withdrawal and better cleanliness while maintaining the typical cosmetic appearance of the penis. In subsequent years, different varieties of preputialplasty, such as V-flap and Z-flap repair, triple incision plasty, and multiple YV plasty, limited dorsal slit preputialplasty have been proposed with good functional results [11]. The results of previously reported studies in children undergoing preputialplasty showed a functional and cosmetic satisfaction rate of 77%-97.6% [12, 13]. Cuckow et al compared with circumcision and reported preputialplasty is associated with few complications and good functional and cosmetic results, provided the prepuce is mobilized regularly after surgery [14]. Circumcision occurs to be the most regularly performed procedure globally but there are reasonable reasons to avoid circumcision given the evidence available today. The preputialplasty is a safe surgical treatment for phimosis in children. It preserves the prepuce and has low complication rate. It expresses a good alternative to circumcision.

Message

1. Overenthusiastic preputial retraction is not advised in children.
2. Preputialplasty is safe, day care surgical procedure.
3. It preserves the prepuce and has an excellent cosmetic and functional outcome.

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