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Review Article

**THOUGH PLASTIBELL IS SIMPLE AND SAFE METHOD OF  
CIRCUMCISION EVEN THEN IT IS REGRETTEED: A  
SYSTEMATIC REVIEW****Dr Muhammad Khalid<sup>1</sup>, Dr Muhammad Asif<sup>2</sup>, Dr Muhammad Faizan<sup>3</sup>, Dr Qadeer Ahmed  
Tariq<sup>4</sup>, Dr Muhammad Saad ullah<sup>5</sup>**<sup>1</sup>Associate Professor Urology DGKMC D.G.KHAN, <sup>2</sup>Assistant Professor Urology DGKMC  
D.G.KHAN, <sup>3</sup>Medical Officer THQ Hospital Kot Chutta D G Khan, <sup>4</sup>Associate Professor  
Urology Sahiwal Medical College Sahiwal, <sup>5</sup>Associate Professor Eye, DGKMC D.G KHAN.**Article Received:** October 2019    **Accepted:** November 2019    **Published:** December 2019**Abstract:**

*Circumcision is the most common surgical procedure in children worldwide. The practice of circumcision is thought to be at least 15,000 years old. The main objective of the study is to review the plastibell method of circumcision even then it is regretted in Pakistani environment. Plastibell circumcision has been shown to be a safe and effective method for use in the community. However, there are recognised complications, acquired phimosis being one. To prevent this complication, we suggest that practitioners should be competent in identifying minor bleeding as a result of a slipped ring. It is concluded that plastibell circumcision has good safety profile with few certainly correctable early impediments. Plastibell circumcision is safe, quick, easily manageable, and acceptable technique for parents. Complications are low in neonates and infants than older age group.*

**Key words:** *Circumcision, Plastibell, Surgical, Procedure.***Corresponding author:****Dr. Muhammad Khalid,**

Associate Professor Urology DGKMC D.G.KHAN.

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## INTRODUCTION:

Circumcision is the most common surgical procedure in children worldwide. 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 [1].

During World War II tropical diseases of foreskin in American servicemen led to an increase in the trend towards routine neonatal circumcision. Neonatal circumcision as a routine procedure underwent a phase of controversy in non-Islamic countries [2]. A report issued in 1975 by the committee on the fetus and newborn of the American Academy of Pediatrics stated that there was no absolute medical indication for routine circumcision of the newborn [3]. In Islamic countries circumcision is a must for all males for religious reasons, but the issue here is whether to do neonatal circumcision or operate at older age. After Christianity, Islam is the largest religion of the world [4]. Total Muslim population is approximately 1.6 billion, approximately 23.2% of world population. Every Muslim male child needs circumcision due to religious obligations. All famous books of hadiths mention circumcision as Sunnah/fitra. History of circumcision dates back to prehistoric era [5]. The Egyptian mummies crafted on walls explored in 19<sup>th</sup> century provide earliest records of circumcision, dating this procedure back to 6000 years BC. Islamic history of circumcision dates back to prophet Ibrahim who did circumcision at the age of 80 years [6].

Circumcision is not only related to Muslim but Jews also practice it routinely due to religious bonding. It is also done in other parts of world as a protective, prophylactic, or curative procedure. Infantile circumcision has been attributed to decrease the risk of penile carcinoma in future, by American Academy of Pediatrics. In uncircumcised children, incidence of urinary tract infection has been reported to be much higher. It is one of the most common surgical procedure done in the world with different techniques [7].

### Background of the study:

Circumcision is still considered "A Gold Standard" treatment for phimosis. Every method of circumcision has its own benefits and risks but as the medical knowledge is expanding, safer techniques are

available, old traditional way of circumcision is decreasing day by day. In underdeveloped world like Pakistan, most of the population lives in rural areas. In these areas, healthcare facilities are rare so circumcision is being done by untrained local practitioners by clamp method (bone cutter), which leads to many complications [8].

### Aims and objectives:

The main objective of the study is to review the plastibell method of circumcision even then it is regretted in Pakistani environment.

### Apprehension about ring of bell and thread:

Circumcision using bone cutter method is blind with frequent tragic outcomes like amputation of glans and urethra-cutaneous fistula that leads to severe post-operative pain and in some cases intractable bleeding requiring with 3-0 absorbable sutures. Over circumcision and under circumcision are also common problems with bone cutter method. According to various studies, the rate of complications using bone cutter method varies from 4.7 to 8.4%. Whereas the rate of complications using plastibell device have been reported to be 2-3% only [9].

Bleeding and local infection have been reported to be the most common complications of plastibell circumcision. Other complications that can occur are; bell impaction, incomplete separation of plastibell device, dysuria, and excessive loss of skin or inadequate skin removal [11].

In this study, we found greater complication rate in bone cutter method. The bleeding rate was higher in bone cutter method as compared to plastibell device method in this study. Incidence of complications using bone cutter method in this study was 3.0% and only 1% in PD group. Traumatic amputation of the glans, urethrocutaneous fistula and over-circumcision were the main complications that occurred in bone cutter method. The only complication that occurred in PD group was urine retention [12]. Freeman et al., showed 95.6% rate of parent satisfaction regarding plastibell circumcision. In our study the parent satisfaction rate was high; it was 98% in plastibell group and only 87% in bone cutter method group. Cosmetic displeasure was found only 1% parents in plastibell group and 4% parents in bone cutter method group [13].

### Safe and effective method:

Plastibell circumcision has been shown to be a safe and effective method for use in the community. However, there are recognised complications, acquired phimosis

being one. To prevent this complication, we suggest that practitioners should be competent in identifying minor bleeding as a result of a slipped ring. Slippage of the inner layer should be suspected if, following the circumcision, the glans appears to have retracted from the edge of the plastibell ring or if one can slide the tip of a mosquito clamp between the ring and glans deeper than the depth of the glans [8]. The most common cause of bleeding is a torn frenular artery, which can be identified easily by the presence of rapid bleeding rather than minor ooze and the fact that it does not usually stop spontaneously. This can cause severe haemorrhage in a neonate and may even require urgent resuscitation and transfusion if presenting late [12].

### DISCUSSION:

Plastibell Device (PD) is associated with shorter operation time, less pain and smaller number of complications as compared to bone cutter method according to the results of this study. It is also associated with the highest level of parent's satisfaction according to the results of our study [14]. So this technique of circumcision should be used routinely as it is associated with least level of complications. As such the surgeon and the parents should not worry to adopt this technique.

Another less precarious reason for bleeding has been injury to the frenulum by the piercing edges of the holder of the PD when separating it from the ring. This threat is curtailed by orientation of the holder of PD in such a way that it is vertical to the frenulum while applying the hemostatic knots [15]. The surgeons operating alone may have severe difficulty during the application of the ligatures so a skilled assistant is required to do so when prompted by the operating surgeon. The suitable sized PD is crucial for successful circumcision and trying slightly larger than the smaller device is sensible. The Plastibell ring usually disengages within 5–7 days, but surgical evaluation is required if separation does not occur by 2 weeks. The retained device may be detached just by applying traction on the ring. Rarely, if it fails than dividing the device with strong scissors may be required, which is done under mild sedation of subject and by applying topical anesthetic cream [16].

### CONCLUSION:

It is concluded that plastibell circumcision has good safety profile with few certainly correctable early impediments. Plastibell circumcision is safe, quick, easily manageable, and acceptable technique for parents. Complications are low in neonates and infants than older age group.

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