Original Article

Religious Circumcision (Khatna) and Circumcision Mishaps in Kashmiri Children

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Abstract

Background: Male circumcision is recommended practice in Muslim tradition and one of the oldest operations performed all over the world. Male circumcision is universal in our Muslim-dominated valley of Kashmir for religious reasons. It can be performed by different techniques such as the conventional open methods, the device methods and sutureless methods. The objective of this study was to report our practice of male circumcision amongst children and compare the different common surgical techniques and highlight the circumcision mishaps conducted by quacks in the Kashmir Valley. **Materials and Methods:** This was a comparative observational study conducted at SKIMS Medical College and Hospital, from 2017 to 2021. Children who presented for primary circumcision were subjected to one of two different surgical techniques; the dorsal slit or Guillotine method. The prospective analysis of children managed for circumcision mishaps conducted by non-professionals was also included in the study. Circumcisions done after 2 years of age were defined as delayed. The data were collected analysed using SPSS software (SPSS version 22, IBM, Armonk, NY, USA). **Results:** Total of 689 Kashmiri Muslim male children between 1 day and 10 years of age over a period of 5 years were studied. Six hundred and fifty-five children for primary circumcision and 34 children managed for circumcision mishaps were included in the study. Amongst the subjects for primary circumcision, the most number of children were between 1 and 2 years of age (33.28%). One hundred and fourteen (25.73%) hospital-delivered babies and 201 (94.81%) home-delivered babies had delayed circumcision that is after 2 years of age ($P = 0.00001$). Religious requirement was the only indication for circumcision in this study. Three hundred and ninety-six (60.46%) children were circumcised with dorsal slit and 259 (39.54%) with guillotine method using computer-generated random numbers. Complications were found 8.08% of subjects in dorsal slit method as compared to 16.60% in guillotine technique ($P = 0.008$). Out of 34 children managed for circumcision mishaps, 11 (32.35%) presented with massive bleeding after primary circumcision by half doctors, 18 (52.94%) had incomplete circumcision, 3 (8.82%) had multiple skin bridges and 2 (5.88%) had incomplete circumcision with glans injury. All the patients with circumcision mishaps were treated with good outcome. There was no mortality. **Conclusion:** Circumcision occurs at a wide range of ages and male circumcision is universal in our Muslim-dominated valley for religious reasons. Circumcision by quacks and the associated complications are still prevalent in our society. The procedure is safe and free of any major complications when conducted by trained medical personnel under aseptic conditions of the operation theatre and hence should be encouraged.

Keywords: Analgesia, dorsal slit, local anaesthesia, male circumcision, religious circumcision

Introduction

Circumcision is the surgical removal of the foreskin, the double-layered fold of smooth muscle tissue, containing blood vessels, neurons, skin and mucous membrane covering the glans penis and protects the urinary meatus. Major indications of circumcision include the religion, cultural, medical and recently public health reasons.[1,2] Circumcision has many other benefits such as protection against penile cancer, recurrent urinary tract infection, balanitis and sexually transmitted diseases.[3-5] Male circumcision is almost universal in our valley of Kashmir due to recommended practice of Islamic culture by Muslims.[6] In Muslim communities, it is usually

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done in infancy but can be performed in late childhood or early adolescence, depending on the family, region and country.[6]

Though the circumcision in government hospitals in our setting is cheaper, sections of our society do not seek qualified treatment either because of ignorance or sheer indolence. Furthermore, due to the door site services provided by quacks (non-medical untrained barber personnel calling themselves Half-Doctors), traditional circumcision (Naid circumcision) is commonly seen in our valley of Kashmir. Quack's circumcision is associated with greater risk, more severe complications, higher cost and slow healing than medical circumcision [Figure 1]. Due to non-availability of devices such as Plastibell, Mogan clamp and Gomco clamp, we use open techniques for circumcision at our centre. The study aimed to report our practice of male circumcision among children, including the age at circumcision and comparison of different common surgical techniques, the frequency of intra-operative and post-operative complications, and to highlight circumcision mishaps conducted by quacks in Kashmir valley.

Materials and Methods

This comparative observational study was conducted at the SKIMS Medical College, Hospital, in the Department of General and Minimal Access Surgery, after clearance from the Departmental Academic and Research Committee (with reference number - SKIMS/MCH/GS/2017-55). Between 2017 and 2021, a total of 655 children for primary circumcision and 34 children managed for circumcision mishaps were incorporated in the study. All the patients between 1 day and 10 years of age who presented for circumcision at the Surgical Outpatient Department were included in the study. Children with congenital, bleeding and syndromic disorders, hypospadias, epispadias, undescended testis and penile defects were excluded from the study. Circumcisions done after 2 years of age were defined as delayed.

The parents/guardians were interviewed about the medical benefits of the procedure in the local language. All the subjects were circumcised under local anaesthesia (daycare procedure) after proper (providing adequate scientific information about the risks, complications and benefits) informed written consent from their legal guardian. The legal guardians were additionally educated regarding the pain control measures, benefits and risks, intraoperative and post-procedure complications before carrying out the procedure.

An anti-septic solution containing 7.5 percent povidone iodine was used to prepare the area, which included the lower part of the abdomen up to the mid thighs. Proper sterilised green drapes with a hole for penis (O-Drape) covering from the chest to the knees [Figure 2] were used. The vial of anaesthetic agent was checked to ensure the correct agent at the proper concentration was being used (drug, expiry date, etc.). 2% plain lignocaine (2-3mg/kg) was used as a subcutaneous penile ring block or dorsal nerve block (given by operating surgeon) supplemented with local application of 2% xylocaine jelly around the glans area was used. The anaesthetic agent was injected using 1 ml insulin syringe to minimise the needle prick pain. Bipolar electrosurgery was used for the control of bleeding. After securing the haemostasis, we used interrupted absorbable catgut sutures for approximation of mucous and skin edges.

After cleaning the area, the patients were subjected to one of two different techniques using computer-generated random numbers; the dorsal slit method or the guillotine method. The infant was placed supine on an operative table, legs astride, secured and fixed with gauze roll and arms held by the theatre nurse. The foreskin which is normally fused to the glans penis, was gently stretched with artery forceps prior to circumcision. The dilated foreskin was retracted and separated from the glans penis by gently running a blunt artery forceps around the glans and wet saline-soaked gauze until the coronal sulcus was well exposed.

In case of the dorsal slit technique, the prepuce was returned to its normal position and a straight artery forceps was used to crush it at 12 O'clock position for one minute. Two artery clamps were applied at 10 and 2 O'clock of prepuce and a cut was made at crushed 12 O'clock position through tissue cutting scissors. The skin was circumferentially removed leaving behind 3–5 mm of the inner leaf of preputial skin. After complete haemostasis, the inner and outer leaves of preputial skin were sutured together with catgut interrupted sutures [Figure 2a].

The Guillotine method involved using two artery forceps at 3 and 9 o'clock positions, holding the glans back between index finger and thumb (Safety Pinch Modification), and applying a straight clamp around the prepuce for one minute. The prepuce was divided on the distal side of the clamp and released. Haemostasis was achieved by bipolar electrosurgery, the inner and outer preputial skin was sutured together with catgut interrupted sutures [Figure 2b].

Soframycin and 2% xylocaine jelly-soaked gauze dressing were applied and fixed with the butterfly-shaped adhesive bandage. Lubricant was applied under the gauze to keep it from sticking to the glans and causing local contamination. The procedure was completed in 15–20 min in both techniques. The patients were kept under observation till the first urination after the procedure. The field block with plain lignocaine, complimented with paracetamol syrup (15 mg/kg/dose thrice a day) for 3–5 days provided good post-operative analgesia.

After 24 hours, the guardians were advised to remove the dressing and clean the circumcision site with warm normal saline once or twice a day, as well as apply a local lubricant directly to the penis for 3-5 days. Parents were instructed to be watchful for worsening redness, swelling, any significant bleeding or drainage, wound infection, fever and any trouble with urination. The parents were directed to bring the circumcised child for follow-up at 1 week, 4 weeks and at 6 months for any complications such as bleeding, infection, secondary phimosis and excessive foreskin.

The statistical analysis was performed using SPSS software (SPSS Version 22, IBM, Armonk, NY, USA). The distribution of continuous variables was evaluated according to the Shapiro–Wilk normality test. If the distribution was normal, Student's *t*-test was used for statistical analysis; if the distribution was not normal, Mann–Whitney U-test was used. The categorical variables were analysed using Fisher's exact test (two-tailed) or Chi-square. The *P* value was estimated and a value < 0.05 was considered statistically significant. The mean and frequency were calculated using Microsoft Excel 2016.

Results

A total of 689 patients, 655 for primary circumcision and 34 children managed for circumcision mishaps were included in the study. Amongst the patients for primary circumcision, age at circumcision ranged from 7 days to 10 years of age. The most number of subjects were between 1 and 2 years of age (33.28%), followed by 2 and 3 years (16.03%), 1 month and 1 year (15.57%), 3 and 4 years (9.31%), 4 and 5 years (8.24%), 5 and 6 years (6.41%), 6 and 7 years (3.66%) and 7 and 8 years (2.75%). Of the 655 children, 2.13% had circumcision under 1 month of age and 1.68% were circumcised between 8 and 10 years of age.

Three hundred and fifteen (48.09%) subjects had delayed circumcision that is after 2 years of age. Out of 443 (67.63%) hospital-delivered babies only 114 (25.73%) had delayed circumcision while as amongst 212 (32.36%) home-delivered babies, 201 (94.81%) had delayed circumcision ($P = 0.00001$). Religious requirement as an indication for circumcision was accounted for 100% of our subjects. Only 32.37% of parents knew the associated medical benefits.

(396) 60.46% children were circumcised with dorsal slit method and (259) 39.54% were circumcised using the guillotine method The complications were reported in 75 (11.45%) circumcisions. Complications were found in 8.08% of circumcisions in the dorsal slit method as compared to 16.60% in the guillotine technique. The differences between the two methods were statistically significant ($P = 0.008$). The oedema was the most common complication found in 32 (4.88%) subjects, followed by skin bridges and wound infection (each 1.83%), redundant foreskin (1.22%), bleeding (1.07%), wound dehiscence (0.46%) and inadequate circumcision (0.15%). All the patients with oedema, bleeding and wound dehiscence were managed by conservative methods. Only patient with inadequate circumcision was subjected to redo after 6 months. None of the patients had post-circumcision phimosis, glans injury, urinary retention, urethrocutaneous fistula, necrosis or any transfusion requirement.

A total of 34 children of circumcision mishaps conducted by non-professionals were admitted and managed. Out of 34 children, 11 (32.35%) presented with active bleeding after primary circumcision by Half Doctors, 18(52.94%) children had incomplete circumcision (the foreskin completely covers the top of the penis when it's not erect) and 3(8.82%) had multiple skin bridges, all of which were common mishaps treated with good outcome. On the other hand, two (5.88%) patients of incomplete circumcision with glans injury were challenging mishaps to manage. Patients with bleeding had frenular artery bleed and were managed by bipolar diathermy, suture closure of mucosa and skin and antiseptic dressings. Children with incomplete circumcision and redundant skin bridges were subjected to redo circumcision and patients with glans injury were referred to higher centres.

Discussion

Male circumcision is a major part of the ritual in the religion of Islam and therefore is universal in our valley of Kashmir due to Muslim dominated society. Nearly 25%–30% of the world's male population are circumcised.[7-10] Male circumcision is commonly conducted for cultural, religious and medical grounds and can be performed at different ages. Phimosis, paraphimosis and inflamed prepuce are some of the medical reasons. In the religion of Islam, although circumcision (Khatna) is the recommended practice (sunnah), there are no clear guidelines on when this ritual should be performed. 50.98% of children were under 2 years of age and 1–2 years was the most common age group (33.28%) in this study. Three hundred and fifteen (48.09%) children had delayed circumcision that is after 2 years of age. Studies have shown that neonatal circumcision is associated with the least risks[11]



Figure 1: Traditional circumcision by quack's in Kashmir (Naid Circumcision)



Figure 2: Intraoperative and post-operative ([a] Dorsal slit technique and [b] Guillotine Technique)

and the highest medical benefits and complication rates increase with the increasing age.[12] When performed by trained professionals, early male circumcision in the neonatal period is easy, less time-consuming, with fast healing and low rates of minor adverse events (0.2%–0.4%).[13]

Although the majority of the parents in the study population (100%) cited religious grounds as an indication for circumcision of their kids, however, surprisingly only 32.37% of parents knew the associated benefits. Parent education, hospital deliveries and raising awareness about the medical benefits of early circumcision could all play a role in promoting timely circumcision in our Muslim-dominated valley. During antenatal and postnatal check-ups, our peripheral healthcare personals and gynaecologists can play an important role in promoting early circumcision.

In our poor income settings, the devices for circumcision are not readily available; therefore the open methods are commonly employed for male circumcision. In our study, complications were reported more in guillotine (16.60%) than in the dorsal slit technique (8.08%) and the difference was statistically significant ($P = 0.008$). The results are comparable to the study done by Abdul Anwer *et al*.[6] which showed the complication rates of 10.1% in freehand circumcision. The study was done by Rehman *et al*.[14] reported adverse events in 16% of circumcisions done using the freehand or bone cutter techniques. Because dissection is done under direct vision in the dorsal slit method, it is safe and effective, and any complication can be identified intra-operatively and addressed appropriately.

Despite such a technological boom in the present times, the vast majority of male circumcisions in our valley are performed by untrained barber personnel calling themselves Half-doctors (Naid circumcision). These non-professionals/quacks use unsterilised instruments in unhygienic environments, hence associated with greater risk, more severe complications and slow healing than medical circumcision. A total of 34 children with circumcision mishaps were admitted and treated with good outcomes. In the hands of untrained, unskilled quacks, without having proper knowledge of procedure and sterilisation and complications rates could be quite high, more severe, complex and devastating in nature.[15] We emphasize the importance of checks and balances at the societal and administrative levels to stop such dangerous non-professional practices that result in regrettable circumcision mishaps.

Conclusion

Circumcision occurs at a wide range of ages, and male circumcision is universal in our Muslim-dominated valley of Kashmir for religious reasons. The procedure is safe and free of any major complications when conducted by trained medical personnel under aseptic conditions of operation theatre. Circumcision mishaps conducted by quacks are still prevalent in our society; hence, hospital circumcision by surgeons should be encouraged. The dorsal slip method of circumcision is associated with negligible amount of any major complications. Furthermore, for paediatric circumcision, local anaesthesia is the most convenient, safe, and effective option, and it is highly recommended.

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Conflicts of interest

There are no conflicts of interest.

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