

Original Article

Practice of performing male circumcisions on young infants, evaluation of several common surgical procedures and drawing attention to circumcision errors

¹Hadi Raza, ²Abdul Basit, ³Ali Raza, ⁴Mohib Ali, ⁵Mobeen Ali, ⁶Umar Khan

¹ PIMS

²Children's Hospital Lahore and Government Mian Meer hospital Lahore

³PIMS

⁴PIMS

⁵PIMS

⁶PIMS

Correspondence
Hadi Raza, PIMS

Abstract

BACKGROUND: Male circumcision is one of the oldest procedures done worldwide and is an encouraged practice in Muslim culture. In Pakistan, all men are circumcised for religious reasons. It may be done using a variety of approaches, including suture less procedures, device methods, and traditional open methods.

OBJECTIVE: This study's goals were to describe our practice of performing male circumcisions on young infants, evaluate several common surgical procedures, and draw attention to circumcision errors committed by quacks in Pakistan.

MATERIALS: A comparative observational research was carried out at Children's Hospital Lahore and duration of study is 2019 – 2022. When a child arrived for a primary circumcision, one of two surgical methods—the dorsal slit method or the Guillotine method—was used. The research also included a prospective review of children treated for circumcision errors by non-professionals. Delayed circumcisions were those performed after the age of two. The analysis of the data was performed using SPSS version 26.

RESULTS: Over a five-year period, 689 Muslim male children in Pakistan, ranging in age from 1 day to 10 years, were examined. The research comprised 655 children for primary circumcision and 34 children treated for circumcision errors. The majority of children (33.28%) who had primary circumcision were between the ages of 1 and 2 years old. 201 (94.81%) of infants delivered at home and 114 (25.73%) of babies born in hospitals had delayed circumcision, which occurs after the age of two (p-value = 0.00001). The sole justification for circumcision in this research was a religious one. Using computer-generated random numbers, 396 (60.46%) and 259 (39.54%) children were circumcised using the dorsal slit and guillotine methods, respectively. In the dorsal slit procedure, complications were discovered in 8.08% of participants, compared to 16.60% in the guillotine technique (p-value = 0.008). Out of 34 infants treated for circumcision errors, 11 (32.35%) had excessive bleeding after primary circumcision by half physicians, 18 (52.94%) had incomplete circumcisions, 3 (8.82%) had several skin bridges, and 2 (5.88%) had incomplete circumcisions with glans damage. All of the patients who had circumcision errors were successfully treated. There wasn't any death.

CONCLUSIONS: Male circumcision is customary in Pakistan for religious reasons and may occur at a broad range of ages. In contemporary culture, quackery-performed circumcision and the ensuing consequences are still common. When carried out by skilled medical experts in the aseptic environment of the operating room, the technique is secure and devoid of any significant difficulties; for this reason, it should be promoted.

KEYWORDS: Circumcision, Anesthesia, Analgesia

INTRODUCTION:

The foreskin, a double-layered flap of smooth muscle tissue comprising blood vessels, neurons, skin, and mucous membrane that covers the glans penis and safeguards the urine meatus, is surgically removed during circumcision. The major justifications for circumcision include those related to religion, culture, health, and most recently, public health. [1,2] Other advantages of circumcision include defense against penile cancer, recurring UTIs, balanitis, and sexually transmitted illnesses. [3-5] Due to the encouraged practice of Islamic culture by Muslims, male circumcision is practically common in Pakistan and other Islamic nations. [6] Depending on the family, location, and nation, it may be carried out in late adolescence or early adolescent in Muslim communities. [7]

Although circumcision at public hospitals in our context is less expensive, some members of our community choose not to seek professional care either out of ignorance or simple laziness. Furthermore, traditional circumcision, also known as "Naid circumcision," is often practiced in Pakistan as a result of the door-to-door services offered by quacks (non-medical, untrained barber employees referring to themselves as Half-Doctors). Compared to medical circumcision, quack circumcision has a higher risk of serious complications, is more expensive, and heals more slowly [Figure 1]. We employ open approaches for circumcision at our facility since tools like the Gomco clamp, Mogan clamp, and Plastibell are not readily available. The study's objectives were to describe our practice of performing male circumcisions on young children, including the age at which these procedures are performed, a comparison of various common surgical techniques, the prevalence of intra-operative and post-operative comorbidities, and a discussion of circumcision errors committed by quacks in Pakistan. At our facility, we do circumcisions using Plastibell, Mogan clamp, and Gomco clamp. The study's objectives were to describe our practice of performing male circumcisions on young children, including the age at which these procedures are performed, a comparison of various common surgical techniques, the prevalence of intra-operative and post-operative comorbidities, and a

discussion of circumcision errors committed by quacks in Pakistan.

METHODS:

Incorporating 34 infants treated for circumcision errors and a total of 655 children who had primary circumcision, this comparative observational research was carried out at Children's Hospital Lahore and duration of study is 2019 – 2022. The research included all of the patients who visited the Surgical Outpatient Department for circumcision and were between the ages of 1 day and 10 years. Children with epispadias, hypospadias, undescended testicles, and penile abnormalities were also prohibited from participating in the research. Delayed circumcisions were those performed after the age of two. Inquiries concerning the procedure's medical advantages were conducted with the parents and guardians in their native tongue. After receiving suitable (offering sufficient scientific data on the potential risks, problems, and advantages) informed written permission from their legal guardian, all participants underwent circumcision under local anesthesia (daycare surgery). Before starting the process, the guardians were also informed about pain management techniques, advantages and disadvantages, problems during and after the treatment, and benefits and hazards.

The region, which comprised the lower portion of the abdomen up to the mid thighs, was cleaned and prepared with an antiseptic dilute solution of 7.5 percent povidone-iodine. From the chest to the knees, proper sterilized green drapes with a hole for the penis (O-Drape) were employed [Figure 2]. To make sure the right agent was being used at the right concentration, the anesthetic agent's container was examined (drug, expiry date, etc.). In addition to a unilateral penile band block or ventral nerve block administered by the operating surgeon, 2% xylocaine jelly was used locally to the region surrounding the glans. To lessen the discomfort from the needle puncture, the anesthetic drug was given using a 1 ml insulin syringe. The management of bleeding was accomplished using bipolar electrosurgery. We employed interrupted easily absorbed catgut sutures to approximate the mucosal and skin borders after achieving hemostasis.

The patients underwent either the guillotine procedure or the dorsal slit method using computer-generated random numbers after the region had been cleaned. The infant's arms were held by the theatre nurse while they were positioned supine on an operating table, legs astride, fastened, and bound with a gauze roll. Before circumcision, the foreskin, which is ordinarily fused to the head of the penis, was gently extended using artery forceps. By carefully maneuvering blunt vascular tweezers around the glans and wetting saline-soaked gauze until the coronal sulcus was clearly visible, the dilated foreskin was drawn back and detached from the glans penis.

In the instance of the dorsal slit procedure, the prepuce was placed back in its usual position before being crushed for one minute at the 12 o'clock position using straight artery forceps. At the prepuce's 10 and 2 o'clock positions, two artery clamps were placed, and a tissue-cutting cut was performed at the 12 o'clock position. A 3-5 mm inner leaf of preputial skin was left after the skin's circumferential removal. The inner and outer leaves of the preputial skin were stitched together using catgut-interrupted sutures after full hemostasis [Figure 2a].

The Guillotine technique required putting a straight clamp on the prepuce for one minute while holding the glans back between the index finger and thumb, using two artery forceps at the 3 and 9 o'clock positions (Safety Pinch Modification). On the distal side of the clamp, the prepuce was separated and then released. Bipolar electrosurgery was used to produce hemostasis, and catgut-interrupted sutures were used to sew the inner and outer preputial skin together [Figure 2b].

The 2% xylocaine jelly-soaked gauze dressing with tobramycin was applied, and the adhesive bandage in the form of a butterfly was used to secure it. To prevent the gauze from adhering to the glans and contaminating the nearby area, lubricant was placed below it. Both approaches took between 15 and 20 minutes to finish the process. The patients were monitored after the surgery until the first urine. Good post-operative analgesia was supplied by the

field block with simple lignocaine in conjunction with paracetamol syrup (15 mg/kg/dose three times a day) for 3-5 days.

The guardians were instructed to take off the dressing after 24 hours, clean the circumcision site once or twice a day with warm normal saline, and then put localized lubrication directly to the penis for 3-5 days. Parents were told to keep an eye out for swelling that became worse, redness that got worse, any major drainage or bleeding, wound infection, fever, and any problems urinating. At one week, four weeks, and six months after the circumcision, the parents were instructed to bring the kid in for a follow-up to check for any issues, such as bleeding, infections, secondary phimosis, and an excessive amount of foreskin.

With SPSS version 26, a statistical investigation was carried out. The Shapiro-Wilk normality test was used to examine the distribution of continuous data. For statistical analysis, Student's t-test was employed if the distribution was normal; if it wasn't, Mann-Whitney U-test was used. Fisher's exact test (two-tailed) or Chi-square analysis was used to examine the categorical variables. A value of less than 0.05 was deemed statistically significant once the P value was calculated. Using Microsoft Excel 2019, we estimated the mean and frequency.

RESULTS:

The research comprised 689 patients in total, 655 for initial circumcision, and 34 kids treated for circumcision errors. The patients who had primary circumcision varied in age at the time of the procedure from 7 days to 10 years old. Nearly 33.28% of the subjects were under the age of two, followed by 16.03% between the ages of two and three, 15.57% between the ages of one month and one year, 9.31% between the ages of three and four, 8.24% between the ages of four and five, 6.41% between the ages of five and six, 3.66% between the ages of six and seven, and 2.75% between the ages of seven and eight. 2.13% of the 655 kids had circumcisions before they were a month old, while 1.68% had them between the ages of 8 and 10.



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

Three hundred fifteen (48.09%) of the participants had delayed circumcision, or circumcision performed beyond the age of two. Only 114 of the 443 (67.63%) infants born in hospitals had delayed circumcision, but 201 of the 212 (32.36%) kids born at home had postponed circumcision (p-value = 0.00001). 100% of our participants had a religious necessity as a reason for circumcision. Only 32.37% of parents were aware of the corresponding medical advantages. (396) Both the guillotine technique (259) and the dorsal slit method (60.46%) were used to circumcise children. 75 (11.45%) circumcisions were reported to have problems. 8.08% of circumcisions using the dorsal slit approach had complications, compared to 16.60%

using the guillotine technique. Statistics showed that there were differences between the two approaches (p-value = 0.008). In 32 (4.88%) of the participants, edema was the most frequent consequence. Other common complications were skin bridges, wound infection, redundant foreskin, hemorrhage, wound dehiscence, and insufficient circumcision. All of the patients were treated with conservative measures for their edema, bleeding, and wound dehiscence. Only those with insufficient circumcision were required to have it redone after six months. None of the patients required transfusions or suffered post-circumcision phimosis, glans damage, urine retention, or urethrocutaneous fistula.



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

34 youngsters who had had unprofessional circumcisions were hospitalized and treated. Out of 34 children, 11 (32.35%) had active bleeding following primary circumcision by Half Doctors; 18, or 52.94%, had incomplete circumcisions (the foreskin completely encloses the top of the penis when it is not erect); and 3, or 8.82%, had multiple skin bridges. All of these common errors were successfully treated. On the other hand, managing two (5.88%) patients with incomplete circumcision and glans damage were difficult. Patients with bleeding were treated with bipolar diathermy, sutures to close the mucosa and skin, and antiseptic dressings for frenular artery hemorrhage. Patients with glans injuries were transferred to higher facilities, while children with incomplete circumcisions and superfluous skin bridges had their circumcisions redone.

DISCUSSIONS: Due to the Muslim majority in Pakistan and the fact that male circumcision is a significant component of Islamic ritual, it is practiced there on a widespread basis. Around 25%–30% of men worldwide have had their genitalia cut. [8-10] Male circumcision can be done at various ages and is frequently done for cultural, religious, and medical reasons. Medical causes include phimosis, paraphimosis, and inflamed prepuce. Although circumcision (Khatna) is the Sunnah (recommended practice) in Islam, there are no established rules on the appropriate time for this rite to be carried out. In this survey, the most prevalent age range for children was 1-2 years, with 33.28% of the population being under 2 years old. Three hundred fifteen (48.09%) kids under the age of two had delayed circumcision. Research has demonstrated that newborn circumcision has the lowest risks [11] and the greatest medical

advantages and that the likelihood of complications rises with age. [12] Early male circumcision in the neonatal period is simple, takes less time, heals quickly, and has a low incidence of minor adverse events (0.2%–0.4%) when done by trained professionals. [13-14]

Surprisingly, only 32.37% of parents in the sample group were aware of the advantages of having their children circumcised, despite the fact that 100% of parents in the study population cited religious reasons as a justification. Promoting prompt circumcision in Pakistan may involve parent education, hospital deliveries, and raising awareness of the healthcare advantages of prompt circumcision. Gynecologists and other peripheral healthcare professionals can be very beneficial in encouraging early circumcision during prenatal and postnatal checkups.

The open techniques of male circumcision are often used since it is difficult to get circumcision instruments in low-income areas. In our analysis, more guillotine (16.60%) problems than dorsal slit (8.08%) complications were observed, and this difference was statistically significant (p -value = 0.008). The outcomes are similar to prior research, which revealed a 10.1% complication risk for freehand circumcision. [15] Another research found that 16% of circumcisions performed using freehand or bone cutter procedures resulted in unfavorable outcomes. The dorsal slit technique of dissection is safe and efficient since it is carried out under direct view, allowing for intraoperative detection and proper management of any complications. [16-18]

Despite the current technological surge, unskilled barbers who identify themselves as "Half-doctors" conduct a vast number of male circumcisions in Pakistan (Naid circumcision). These quacks and non-professionals utilize contaminated equipment in unsanitary settings, which puts patients at higher risk for complications and slower recovery than with medical circumcision. 34 kids who had circumcision errors in total were hospitalized and treated successfully. In the hands of uneducated, inexperienced quacks, without sufficient understanding of process and sterilization, complication rates might be rather high, more severe, complicated, and destructive in nature.

[19,20] We stress the need for safeguards and checks at the social and institutional levels to prevent such risky non-professional practices that lead to unfortunate circumcision accidents.

CONCLUSIONS: Male circumcision is widespread in our Muslim-dominated Pakistan for religious reasons and happens at a broad range of ages. When carried out by skilled medical experts in an operating room with aseptic conditions, the surgery is secure and devoid of any significant problems. The use of surgeons for hospital circumcision should be promoted since accidents involving circumcision caused by quacks are still common in our culture. There are very few serious problems related to the dorsal slip technique of circumcision. Additionally, regional anesthesia is the most practical, secure, and efficient choice for pediatric circumcision, and it is strongly advised.

REFERENCES:

1. Hassan, Y., Rasool, H., Rather, A. A., Ahmad, Y., & Rasool, I. (2022). Religious circumcision (Khatna) and circumcision mishaps in Kashmiri children. *African journal of paediatric surgery*, 19(4), 213.
2. Roy, M., & Roy, K. S. An Overview Of Fgm/C And An Analysis Of Different Intervention & Feasibility To Eradicate The Same In India.
3. Abdulcadir, J., Sachs Guedj, N., & Yaron, M. (2022). Female Genital Mutilation/Cutting in Children and Adolescents: Illustrated Guide to Diagnose, Assess, Inform and Report.
4. Giorgi, D. (2021). *Female genital mutilation and the best interests of the child principle* (Doctoral dissertation, North-West University (South Africa)).
5. Almas, N., & Sabahat, S. (2020). PRACTICE OF FGM/FGC AS CUSTOMARY/CULTURAL RITUAL IN A PARTICULAR COMMUNITY IN PAKISTAN.
6. Khan, A., Shekhani, S. S., & Jafarey, A. (2018). Demystifying the practice of khafd in the Dawoodi Bohra community: A commentary on the WeSpeakOut report

- from India. *Indian journal of medical ethics*, 4(1), 65-70.
7. MATHEW, F. A. (2020). *BLEEDING FOR HONOUR: LIFE EXPERIENCES OF WOMEN UNDERGOING GENITAL MUTILATION AMONG DAWOODI BOHRA COMMUNITY IN KOCHI* (Doctoral dissertation, Loyola College of Social Sciences).
 8. Bootwala, Y. (2019). A review of female genital cutting (FGC) in the Dawoodi Bohra community. *Current Sexual Health Reports*, 11(3), 220-227.
 9. Abdulcadir, J., Sachs Guedj, N., & Yaron, M. (2022). Female Genital Mutilation/Cutting in Children and Adolescents: Illustrated Guide to Diagnose, Assess, Inform and Report.
 10. Bootwala, Y. (2019). A review of female genital cutting in the Dawoodi Bohra community: Part 3—the historical, anthropological and religious underpinnings of FGC in the Dawoodi Bohras. *Current Sexual Health Reports*, 11(3), 228-235.
 11. Taher, M. (2020). Sahiyo stories: shattering the silence on female genital mutilation/cutting. *Violence against women*, 26(14), 1760-1770.
 12. Letuati, A. (2020). *Gender based violence and International human rights question: a case of female genital mutilation in Kenya* (Doctoral dissertation, University of Nairobi).
 13. Thanenthiran, S. THE STATUS OF ADOLESCENTS'SRHR IN ASIA AND THE PACIFIC REGION.
 14. Nolan, B. G. (2019). *Bodily Becomings: An Ethnographic Exploration from the Top of the Coconut Tree* (Doctoral dissertation, The University of Western Australia).
 15. Desai, B. H., & Mandal, M. (2022). Role of the Cultural Factors in SGBV. In *Sexual and Gender-Based Violence in International Law* (pp. 157-204). Springer, Singapore.
 16. Hillmann, K. (2019). An end to inaction: Addressing female genital mutilation in Canada.
 17. Ackermann, Z., Karremann, I., Malhotra, S., & Zaidi, N. (2021). *Terrains of consciousness: multilogical perspectives on globalization*. BoD—Books on Demand.
 18. Lunde, I. B. (2020). A qualitative study on female genital cutting among Kurdish-Norwegians.
 19. Letuati, A. (2020). *Gender based violence and International human rights question: a case of female genital mutilation in Kenya* (Doctoral dissertation, University of Nairobi).
 20. Abhiyan, W. N. T. (2017). Sustainable Development Goals: Agenda 2030. *A Civil Society Report*.
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