

# METHODS OF CIRCUMCISION PRACTICED IN CENTRAL PAKISTAN AND THEIR COMPLICATIONS

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## ABSTRACT

**Background:** Circumcision is the most common surgical intervention performed in non-medical settings. It is the most common but neglected procedure in our country. Barbers, quacks and other non qualified persons perform circumcision by their own methods without proper sterilization and without knowing the consequences. **Objectives:** The objectives of our study were to determine different methods of circumcision and outcome of these methods in central Pakistan. **Patients & Methods:** This was an observational study conducted by the Department of Pediatric Surgery, Sheikh Zayed Hospital, Rahim Yar Khan. A total of 600 cases were included in this study and information was recorded on a pre-designed performa. Attendants/parents having the best knowledge regarding circumcision of the child were interviewed. Related clinics were contacted to determine the methods of circumcision and sterilization techniques, where found necessary. **Results:** Out of 600 cases 157 (26.17%) were circumcised in the 1<sup>st</sup> month of life (mean age: 10±3.5 days), 92 (15.33%) in first year (mean age: 7±2.4 months) and 351 (58.5%) between one to twelve years of age (mean age: 6±2.33 years). Regarding the personal who performed circumcision 110 (18.33%) cases were circumcised by the barbers, 139 (23.17%) by quacks, 210 (35%) by General Practitioners (GP) and 141 (23.5%) by surgeons (General and Pediatric Surgeons). Regarding the methods of circumcision, bone cutter method was the commonest, 307 (51.17%), whereas, only 60 (10%) cases were circumcised by plastibell technique. Complications were more with barber method and less with plastibell technique. Under circumcision (too less prepuce is removed) is the commonest complication with barber method. Out of 110, the 11 children (10%) were under circumcised. In bone cutter method, out of 307 cases, 15 (4.87%) were under circumcised. No case was under circumcised with plastibell or open method. With barber method 06 cases (5.45%) got infected. They consulted doctors and were cured with antibiotics. Three (0.977%) cases were infected with bone cutter method. Bleeding occurred in 10 patients after bone cutter method and stitching was done. There was no bleeding with plastibell or open method. **Conclusion:** Our study showed that a big proportion (41%) of male children are still getting circumcised by unskilled (quacks and barbers) operators and commonest method of circumcision was bone cutter method. There is a dire need to educate the people regarding age, methods of circumcision and their possible complications.

**Key words:** Circumcision, Bone cutter method, Plastibell method.

## INTRODUCTION

Circumcision is the most common surgical intervention performed in non-medical settings within the community and is performed on millions of male children worldwide.<sup>1</sup> Neonatal circumcision continues to be a controversial issue, although it has been shown to have a preventive effect on urinary tract infections in infants and penile cancer that might develop later in life.<sup>2</sup> Circumcision (Latin Circumcido, to cut around) is an elective surgical procedure in which the skin covering the end of the penis (prepuce or fore skin) is excised. Despite controversies, neonatal circumcision is one of the most commonly performed elective procedure in United States.<sup>3</sup>

Although there is a wide variation in the rate of circumcision throughout the world, it has been estimated that one out of six males in the world is circumcised.<sup>4</sup> Circumcision has been presented as a symbol of the therapeutic state, as a mutilating procedure, as a religious ritual and as a prophylaxis against a variety of diseases.<sup>5,6</sup> Like other Islamic countries, circumcision is the commonest elective procedure in Pakistan, although there is a wide variation in age at the time of circumcision.<sup>7</sup> Systematic review of male circumcision and ulcerative Sexuality Transmitted Infections (STI) strongly indicates that circumcised men are at lower risk of chancroid and syphilis and there is less association with herpes simplex virus type-2.<sup>8</sup> There are many methods of circumcision in different parts of the world like Gomco clamp, Plastibell, Mogen clamp and open method. Barbers have their own different methods of circumcision in which no anesthesia is given. Usually the kid is held by the senior person of the family and hand made instrument is used to hold the prepuce. Foreskin is cut with shaving knife without any sterilization.

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**Figure: I**  
**Instruments for barber method of circumcision**



After circumcision remaining prepuce is reduced back over the glans and home made ointments or cloth ash is applied for haemostasis without any dressing. Bone cutter method, is the common procedure. In this method bone cutter is applied carefully but tightly on the prepuce after preserving glans. The objectives of our study were; to determine different methods of circumcision and outcomes of these methods in central Pakistan.

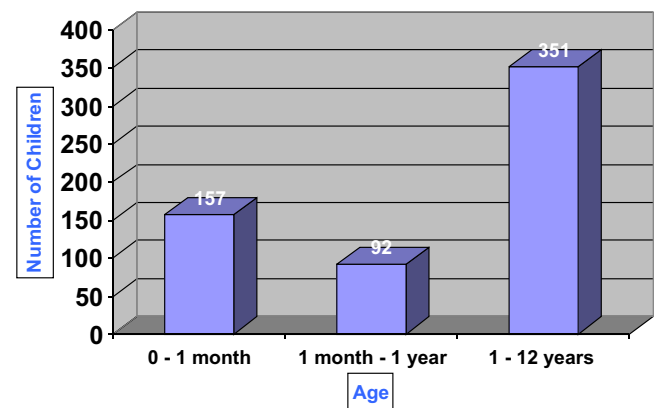
## PATIENTS AND METHODS

This study was conducted in Sheikh Zayed Hospital, Rahim Yar Khan, where a large number of patients are referred from Southern Punjab, upper Sindh and Balochistan. All circumcised male children up to twelve years of age presenting in Pediatric Surgery out patients department were included in the study. A comprehensive performa was used to collect data, including age at circumcision, method of circumcision, circumcision done by barbers, quacks or doctors and complications of different methods. A total of 600 cases were included from 1st March, 2007 to 30th April, 2008. In all cases, it was mandatory that the attendant who was selected for related information, was actively involved in the circumcision process and knew all the details regarding circumcision. Usually this was the father, grandfather or mother. Children who were not circumcised, suffering from bleeding disorders, or were more than 12 years of age were not included in the study. Similarly, the children

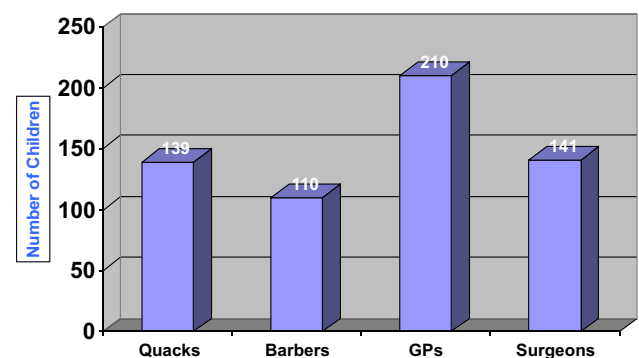
whose attendants did not have knowledge regarding above mentioned details were excluded from the study. In those cases, where the method of circumcision was not known by the attendants, we did our best to collect all the details by communicating with the quacks, barbers and also by visiting different clinics and surgeons. At the end, the attendants were asked regarding complications after circumcision like unusual bleeding, infection, glans injury and under circumcision (too less prepuce is cut).

## RESULTS

A total of 600 cases were included in study, out of them 157 (26.17%) children were circumcised in neonatal age (mean age:  $10 \pm 3.5$  days), 92 (15.33%) from first month to 12 month (mean age:  $7 \pm 2.4$  months) and 351 (58.50%) between one to twelve years of age (mean age:  $6 \pm 2.33$  years) (Figure II:). 110 (18.33%) children were circumcised by barbers, 139 (23.17%) by quacks, 210 (35%) by general practitioners, 141 (23.5%) by Surgeons (General and Pediatric surgeon) Figure: III.

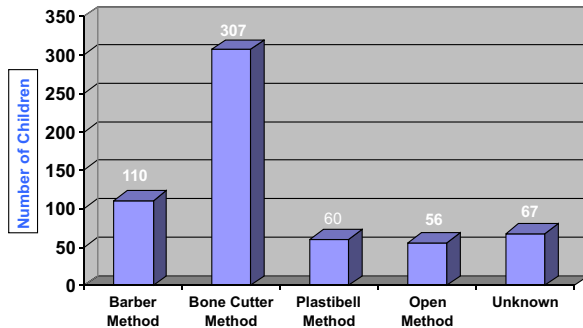


**Figure II: Age wise distribution**



**Figure III: Circumcision by different operators**

Regarding the methods of circumcision 307 (51.17%) cases were circumcised by bone cutter method. Plastibell was used in 60 (10%) cases and in 67 (11.17%) cases method of circumcision was not clear. 56 (9.33 %) cases were circumcised by open method. These were usually older children in which application of plastibell or bone cutter is difficult. (Figure IV)



**Figure IV: Methods of circumcision**

Under circumcision (too less prepuce is removed) is the commonest complication with barber method. Out of 110, the 11 children (10%) were under circumcised. In bone cutter method, out of 307 cases, 15 (5%) were under circumcised. No case was under circumcised with plastibell or open method. With barber method, 06 cases (5.45%) got infected. They consulted doctors and were cured with antibiotics. Three (0.977%) cases were infected with bone cutter method. It was reported that bleeding occurred in 10 patients after bone cutter method and stitching was done. There was no reported bleeding with plastibell or open method.

## DISCUSSION

In Western countries, controversies exist whether circumcision should be performed or not. Circumcision proponents argue that circumcised boys have lower urinary tract infection, lower incidence of zipper injuries or paraphimosis, lower rate of sexually transmitted disease and penile cancer.<sup>9,10,11</sup> Circumcision has a protective effect against AIDS. In an editorial comment on the epidemic spread of HIV-1 in Asia, Weniger and Brown pointed out that, routinely those countries in which circumcision is practiced (Bangladesh, Indonesia and the Philippines) rapid sexual transmission of HIV-1 is less likely.<sup>12,13</sup> In Pakistan, circumcision is performed due to

religious obligations in muslims although social and cultural factors predominate. Knowledge regarding circumcision is very little especially in people coming from rural areas. Most of them follow their forefathers and get their children circumcised from the nearest available operator without considering qualification and sterilization. We found that 41% of the circumcision were done by quacks and barbers whereas, 57% of the circumcision were carried out by general practitioner and surgeons. It was observed that people coming from rural areas, especially Sindh and Balochistan circumcise their children at a later age, usually after one year. Our study has shown that 58% of the circumcision were done on boys from 1 to 12 years of age.

In our study, 110 (18.33%) children were circumcised by barbers, which shows the lack of knowledge and ignorance by attendants. When these parents were further interviewed they said that easy access, low cost and previous experiences were the reasons that they went to barbers.

Plastibell method is becoming popular now a days because of the excellent results and less complications. A study was conducted by Rafiq K in 2000 regarding circumcision by plastibell technique.<sup>14</sup> He concluded that this method seems to be a superior technique for neonatal circumcision. It provides excellent results with few and mild complications. This is in agreement to our study in which plastibell has a good cosmetic result without any bleeding or infection. Parents' satisfaction is more with this method but unfortunately, only a small number of kids are benefitted because of the lack of knowledge and awareness.

In another study conducted by Iftikhar Ahmad Jan, plastibell is a safe method of circumcision under one year of age.<sup>15</sup> Older children should have circumcision by other methods. When properly done newborn circumcision is a quick and simple procedure with a low complication rate. Morbidity and cost of circumcision are much lower for newborns, than they are for older children.<sup>16</sup> Similarly, in our study a large number of children 351 (58.5%) are circumcised after one year of age, whereas, plastibell method was used in small number of children. Different methods of circumcision are applied in different parts of the world. In Saudi Arabia a study was conducted by Amin M, Raja M, Niaz W which concluded that Gomco clamp is safe and effective technique with comparable results.<sup>17</sup> This method is rarely used in



our part of the world.

Another comparative study was done by Javid ur Rehman in 2007, between bone cutter method and open method of circumcision, which showed an insignificant difference in terms of bleeding, superficial infection and cosmetic appearance.<sup>18</sup> Both methods proved to be safe and effective, except for trauma to glans (a well known complication) which is more common with bone cutter method especially in the hands of inexperienced operator. In another study, it was reported that the early complications mainly included bleeding, which was reported in 0.1–35% and wound infection in 0.2–0.4% . Our study has revealed that under circumcision was commonest with the barber method (10%), with bone cutter method (5%) whereas no case was reported with plastibell method. Infection was reported in 5% of cases with barber method.

## CONCLUSION

Circumcision, particularly in infants and children, is not a trivial procedure that can be performed within a few minutes by an inexperienced surgeon. On the contrary, circumcision should be performed by an experienced individual who can evaluate the patient preoperatively and identify contra-indications to the procedure, manage possible complications and evaluate patients post-operatively. Circumcisions by barbers and quacks should be discouraged as they are not trained in this respect. Electronic and print media can play a key role to educate the people regarding different methods of circumcision under strict aseptic measures according to standard protocol.

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