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Circumcision in north of IRAN: The results of operation by experienced and inexperienced operators

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Abstract

Background: Circumcision is the most common surgical procedure that is performed in the world today. In some countries non-surgeon person is performed this procedure. The aim of this study was to assessment and comparison of circumcision results in different group of experience and inexperienced operators.

methods: In a randomized study, 1000 children less than 12 years old were studied for circumcision outcome. In this study, Symmetry of the skin and mucous and any other forms of abnormal appearance was recorded. The association of morbidity with techniques and operator were evaluated.

Results: The age range from one month to 12 years (4.5 years \pm 3.1) and the maximum age at circumcision 1 to 12 months (63.5%) and neonatal period (28%), respectively. Procedure quality in 79 % of patients was satisfied and 21 % of patients had complications. These complications were mainly cosmetic and including excess mucosa (6.1%), asymmetric skin-mucosa junction (3.5%), Excessive residual foreskin (1.3%), Excessive foreskin removal (1.3%) and penile adhesion (1.3%). The rate of complications in the plastibell device group was less significantly ($P < 0.05$). As well as the complication rate in the surgeon operator was lower than non surgeon operator ($P < 0.05$), but this difference is not seen for the time using plastibell method.

Conclusion: The complication rate in the surgeons group was significantly lower than nonsurgeon operators. The best technique of surgery in mass circumcision and inexperience operator is plastibell method. However, it seems doing of this operation by non-specialists need to reassessment.

Keywords: Circumcision, Complication, Surgery.

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INTRODUCTION

Circumcision dates is back more than five thousand years ago (Yegane *et al.*, 2006). This operation is the most common surgical procedure that is performed in the world today. In total, about 30 percent of men in worldwide are circumcised that mainly rooted in religious matters (Weiss and Polonsky, 2007). This rate in America in 1992 was 60% (Holman and Stuessi, 1999). Circumcision is the most common surgery performed in the world (Drain *et al.*, 2006). Several studies have already been conducted on the benefits of circumcision including extremely decrease the risk of male genital tract and uterus cancer (Drain *et al.*, 2006; Dhar *et al.*, 1993) reduce the rate of urinary tract infection (Christakis *et al.*, 2000; Peng *et al.*, 2008) and decrease the prevalence of sexually transmitted (Christakis *et al.*, 2000; Drain *et al.*, 2006). The disadvantages associated with circumcision also published in many articles that deal to complication of it. There was very wide range of incidence of complications in different studies from 0.19% to 20.2% (Mak *et al.*, 1995; Okeke *et al.*, 2006) in a clinical trial from Iran, complication rate for the common of the procedure

(sutures) was 1.95% and in clamp method was 7% (Mousavi and Salehifar, 2008). A study by the Yeganeh and colleagues over 3205 school children found that 7.6 % of them were late complications that the most common complication was redundant foreskin (Yegane *et al.*, 2006). In Iran, it is rooted in religious beliefs and for this reason, almost all boys from neonatal period to 4-5 years old to be circumcised.

This operation by various people, including pediatric surgeons, general surgeons, urologists, pediatricians, general practitioners, and even those who do not follow academic education. Surgical techniques in the surgical group are academic and in the others are non-academic and inexperienced. So, it results in the two groups has not yet been analyzed. What is remarkable is that in all the studies have been investigated cited to complications such as bleeding and infection but none of them did not mention to the standard incision and circumcision quality of cosmetic. Therefore, in this study we evaluate the results of surgery by trained personals.

MATERIALS AND METHODS

This study was a cross-sectional study. Sampling method was convenient sampling. The subjects were boys aged less than twelve years old referred to Boooli Hospital as a referral hospital in Sari, northern of Iran. These patients had non genital problems. Required sample size was based on literature review and the formula with 10% for complication and $\alpha=0.05$ was calculated 1000. These individuals were selected randomly. After sampling the child's age, age at circumcision, circumcision expertise was registered. Physical examination by a blind physician and possible disadvantages records were based on a standard circumcision (Holcomb and Murphy, 2010). This assessment took at least one month after surgery. Items recorded were: the size of the mucosa, size of prepuce, and regularity of the incision line, prepuce adhesion to the glans, tracking and any abnormality on the penis. Finally, the information recorded on data collection forms were entered into SPSS statistical software version 16. This data was analyzed using Chi-Square test and t-test at a significance level of $P<0.05$.

RESULTS

During the spring of 2013, all boys under 12 years that referred to Boooli Hospital as a referral center for children in Sari was enrolled. Total samples were 1000 children that were referred with non-genital reasons and parents have no problem in terms of circumcision shape and were satisfied. Age range from one month to 12 years (4.5 years \pm 3.1) and the frequent age group for circumcision was 1 month to 12 years (63.5%) and neonatal period (28%), respectively. Technically, 62.4% of individuals underwent surgery with suture and 37.6% with plastibell device. Tracking was seen in 30.5% of those was used suture technique but not regarded as a complication. There were 23 (2.3%) children who had meatal stenosis.

quality of circumcision but the actual results to be assessed after puberty. Complication rates in different studies varies from 0.19% to 3.1%, although in some studies, these rate were 20.2% and 48% (Okeke et al., 2006; Lagarde et al., 2003). Complication rates have been reported different considering to the different types of surgical technique. In our previous study, circumcision complication was 7.08% and 1.95% in plastibell device and sutures, respectively (Mousavi and Salehifar, 2008) (Mousavi and Salehifar, 2008). In Yeghaneh and colleagues study, prevalence of late complication was 7.39%, although 43.49% underwent surgery by traditional circumcisor (Yegane et al., 2006). Many studies have emphasized that the rate of serious complications is less in plastibell method.

Such as bleeding, infection, glans injury and etc (Lazarus et al., 2007; Fraser et al., 1981), but suture technique, it does not increase the incidence of complications, despite glans damage as a dramatic complication. This complication is predictable in the hands of the unskilled is higher (Lagarde et al., 2003; Essid et al., 2005; Sherman et al., 1996; Gluckman et al., 1995). The point here is that in the mass circumcision, which requires a high operating speed is and similarly, in situations where a person with low experience and non-academic education even without the surgery which method is more suitable for him? Among these complication, cosmetic things are required precision and patience circumcisor. The complications in the person with surgical science have been less. The complication rate in plastibell method acting it is less dependent to circumcisor because complications of these procedures in all groups are similar. We are recommended plastibell method for person to insist on perform circumcision. Since the most common complication of this technique is mucosal excess, to achieve the best results, the most important point is usage of plastibell device with adequate size.

Table 1. The result of circumcision based on the operators and different techniques

Quality of operation	operator		technique		Total (%)
	Surgeon (%)	Non surgeon (%)	Suture (%)	Plastibell(%)	
suitable	421(83.3)	369(74.5)	476(94.2)	314(83.5)	790 (79)
unsuitable	84(16.6)	126(25.4)	148(23.7)	62(16.5)	210 (21)
	505	495	624	376	1000 (100)

The incidence of stenosis in suture and plastibell device groups was 1.2% and 1.1%, respectively. There was not any correlation between the age of operation and this complication. The relation between the age of circumcision and complication rates were not significantly different but the rate of complications in the plastibell device group was less significantly ($P<0.05$). As well as the complications rate in the surgical operator was lower than non-surgical operator ($P<0.05$), but this difference is not seen for the time using plastibell method (Table 1).

DISCUSSION

Today, circumcision is the most common surgery performed in the world (Drain et al., 2006). However, the surgery should be performed by trained personnel but in some countries, people with no academic education also to do it (Ozdemir, 1998). However, many parents have expressed satisfaction with the

Conclusion

Circumcision at all ages which will have the same complication. The complications rate in the surgical operator was significantly lower than nonsurgical operator. The best method of circumcision in mass circumcision or circumcisor with low experience or non-academic is plastibell device technique. However, it seems doing of this operation by non-specialists need to reassessment.

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questionnaire, seyed jaber Mousavi contributed to the analysis of data.

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