Original Article

Is Bone Cutter a Safe Tool for Performing Ritual Circumcisions: An Audit of 329 Consecutive Cases

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Objectives: To evaluate the safety of unconventional use of a bone cutting instrument for ritual circumcision.
Materials and Methods: Record of all the cases undergoing circumcision between January 1, 2002 and December 31, 2006 was collected from the operation theatre logbook and reviewed to work out the incidence of iatrogenic injury, significant bleeding necessitating fluid replacement and adequacy of margins of preputial excision.
Results: A total of 329 patients underwent circumcision as social or religious ritual during this 5 years period. No iatrogenic injury to penis took place and no significant bleeding was encountered. The excised margins did not require revision in any patient.
Conclusion: The described technique for ritual circumcision using bone cutter can be considered as a safe method when done by trained hands.
Key Words: Circumcision, Bone cutter method.

Introduction

Circumcision is a religious custom in Muslim families. As a result this procedure constitutes a significant percentage of operative procedures done in our country. Various methods like sleeve resection technique,[1] free hand technique,[2] bone cutter method,[3] and use of various purpose built clamps[4] have been described in the English literature. This paper evaluates the safety of bone cutter method of circumcision done in a standardized way by the same surgeon in consecutive 329 patients requesting ritual circumcision over a 5 year period.

Material and Methods

Operation record of patients undergoing ritual circumcisions between January 1, 2002 and December 31, 2006 was reviewed retrospectively to find out the incidence of iatrogenic injury to the penis, significant bleeding necessitating fluid replacement and need for immediate revision of margins of excision. Age of the patients undergoing circumcision and type of anaesthesia used was also recorded. Patients undergoing circumcision for some medical indication were excluded from the study.

All the patients were circumcised by the author. Where local anaesthesia was used, it was instituted in the form of bupivacaine penile block by the surgeon himself. General anaesthesia where used was administered by a consultant anaesthetist.

The following steps were followed in every patient: Prepuce was retracted to break adhesions and clear smegma (Fig. I, a). Prepuce was replaced back and its free edge grasped with straight haemostats at 6 and 12 o'clock position (Fig. I, b). Level of excision of prepuce was marked as a line 2 mm proximal but parallel to the line of coronal sulcus while holding the haemostats in a vertical fashion without exerting any pull on the prepuce (Fig. I, c). While keeping the applied haemostats taut, penile skin was pulled vertically upwards so that marked line of excision on the preputial skin moved distal to the tip of the glans (Fig. I, d) and prepuce was then grasped lightly with the bone cutter (Cottle Kazanjian bone cutting forceps, 19.0 cm, Martin's Catalog # 23-930-19, Fig. I, k & l) along the marked line of excision (Fig. I, e). Adson forceps was inserted into the preputial opening and opened like a nasal speculum to view inside of the prepuce. A blunt probe was then moved inside the preputial opening along the line of excision to ensure that bone cutter jaws were not grasping any tissue other than prepuce. After ensuring this, handle of the bone cutter was squeezed to crush the preputial skin. While still hold the bone cutter tight, preputial skin immediately above (distal) to the flat surface of bone cutter jaw was excised with scalpel (Fig. I, f). The resulting clean cut usually did not bleed as preputial vessels were effectively sealed by the bone cutter's sharp edges. The sealed layers of prepuce were gently separated and retracted back on the penile shaft (Fig. I, g) and adequacy of margins of preputial excision was assessed. All the divided vessels were

Divided skin edges were approximated with 4/0 chromic catgut (Fig. I, i & j). An antibiotic ointment impregnated gauze dressing was then applied over the suture line and secured.

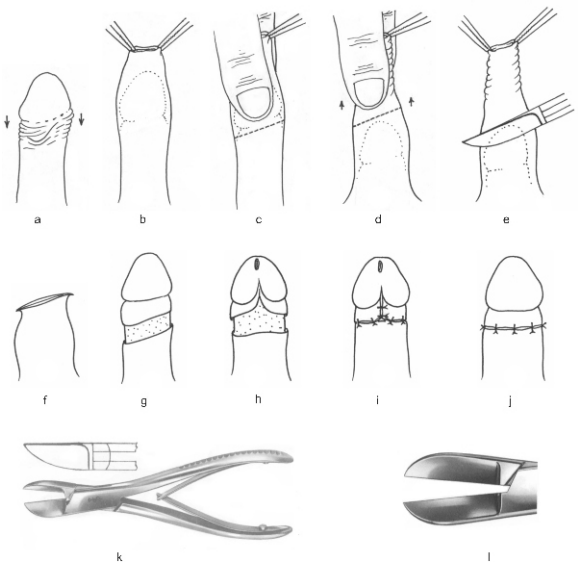

Fig-1: Steps of the procedure.

Results

A total of 329 patients underwent circumcision. This comprised of 171 neonates, 103 infants, 40 children between 1to 5 years of age and 15 children older than 5 years. Out of these 329 patients circumcision was done under bupivacaine penile block in 252 patients while the remaining 77 patients were given general anaesthesia.

There was no case of iatrogenic injury to penis, no episode of significant bleeding took place and immediate revision of excised margins of prepuce was not required in any patient.

Discussion

Although many methods for doing circumcision are currently being practiced, the technique employing bone cutter as described above has many merits. The procedure is completed in a reasonably short time and is done in almost bloodless field. Cut edges are very neat and the length of excised prepuce is accurate. This instrument closely resembles the Mogen clamp in many ways but appears easier to handle, is cheap and is readily available in almost every operation theatre. It is important to select the correct size of the cutting jaw of the bone cutter as preputial skin tends to extend beyond the boundaries of smaller size instruments. Our experience in consecutive 329 cases is different from that reported by Rehman et al.[5] It appears that it is the experience of the operator with a particular technique and not the technique itself that determines the final outcome. We hope that if important steps of the bone cutter technique are correctly applied, complications like those reported by Kaplan[6] and Gluckmann et al[7] shall be very uncommon.

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