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Original Research Article

Phimosis and Circumcision; A Study at Tertiary Rural Referral Centre in the Marathwada Region of Maharashtra

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Abstract:

Aims & Objectives: To study, compare and form a standard protocol for 'Sleeve circumcision with modification and use ofbipolar diathermy 'to minimize morbidity and complications.

Methods: The study was conducted at tertiary rural referral center between Jan. 20 to Dec. 22, three years All circumcision performed as an elective procedure including all cases of true phimosis within age group of 5 to 75 yrs.

Results: Total 138 cases. Intraoperative uneventful. Postoperative mild to moderate oedema without pain & discomfort i.e., Children 10% to old age 72%which did not required treatment except assurance and counselling. No patient had bleeding or redo procedure. UTI was seen in older age group due to associated co morbid condition, cystitis, prostatitis or upper tract insult.

Conclusion: The sleeve circumcision with modification and use of bipolar diathermy shows safe outcome, negligible complications with good cosmetic outcome.

Keywords: Circumcision, Phimosis, complications

Introduction

Phimosis whether congenital or acquired is a condition in thepenis characterized by natural Balan preputial adhesions, excess foreskin and various degrees of constriction in its opening which prevents the total or partial exteriorization of the glans [1,2] Male circumcision is surgical removal of prepuce (Foreskin) either in whole or in part [1,2] Male circumcision is the one of the oldest documented surgeries in dating way back toEgypt in 2300 B.C. [2,3] Today circumcision is the most commonly performed surgeryworldwide also at our institute which is rurally located medical college and hospital in Jalna district, Marathwada region of Maharashtra

Materials & Methods:

Study Site: JIIU'S IIMSR Medical college andNoor hospital, Jalna

Study Duration: 1st Jan. 2020 to 31st Dec. 2022 total 3 years period.

Inclusion Criteria: All cases of true phimosis of the age group between 5 Years to75 Years

Exclusion Criteria:

1. All neonatal circumcisions.
2. Religious circumcisions.
3. Present with acute or chronic paraphimosis.
4. Those patients who required additional procedures like Meatotomy, Meatoplasty, Cystourethroscopy, Urethral or meatal calibration and catheterization.
5. Those patients who had incidental detection of tumor,Urethral or
6. Those patients who undergone Redo circumcision.
7. Those patients who underwent excisional or incisionalbiopsy.

Procedure Followed

All patients fulfilling inclusion criteria were evaluated on OPD basis including pre-anesthesia checkup and medical fitness. All patients were admitted a night before operation.

All adult patients undergone procedure with intravenous sedation and local 2% plain xylocaine as a ring block (Table 2). All old and above 50 years of age procedure is done underlocal 2% plain xylocaine as ring block. In some patients due to inadequate effect while frenal dissection additional local infiltration was given. All patients underwent 'Sleeve circumcision' with use of bipolar diathermy. Suture material used for pediatrics 3-0 /4-0 single chromic catgut & for young adults 2-0 /3-0 single chromic catgut. We do not take figure eight '8' suture at frenum but do

frenal slide and simple suture and hemostasis was achieved by bipolar diathermy. Dressing done with antibiotic-impregnated guaze. All patients were kept indoor for 24 to 36 hours after procedure.

Results

Total 138 patients underwent the procedure.

Table 1: Age distribution of cases coming for circumcision

Age Group	No. of Cases	Percentage (%)
1) 5 – 15	46	33.3%
2) 15 – 30	28	20.2%
3) 30 – 45	22	15.9 %
4) 45 – 60	24	17.3 %
5) 60 – 75	18	13 %

Maximum that is 33.3% patients coming for circumcision were in the age group 5-15 years (table 1).

Table 2: Type of anaesthetia given as per age group

Age Group	Type of Anesthesia
5 – 15	General anesthesia (G.A.)
15 – 30	I.V. Sedation with local Ring block atbase of / root of penis
30 -45	Sedation with L.A. Ring block
45 – 60	L.A. Ring block
60 – 75	L.A. Ring block with 2% plainXylocaine/ Lignocaine

Table 3: Post-operative sequel and complications after sleeve circumcision

Age Group	Wound Edema	Bleeding	Skin Bridge	UTI
5 -15 (46)	5 (10 %)	0	0	2(4.3 %)
15 – 30 (28)	7 (25 %)	0	0	0
30 – 45 (22)	8 (36 %)	0	0	0
45 – 60 (24)	12 (50 %)	2 (8%)	0	4 (16 %)
60 – 75 (18)	13 (72 %)	3(16.6 %)	0	8(44.4 %)

Wound edema was the most common sequalae after the procedure and very few patients showing urinary tract infection (Table3)

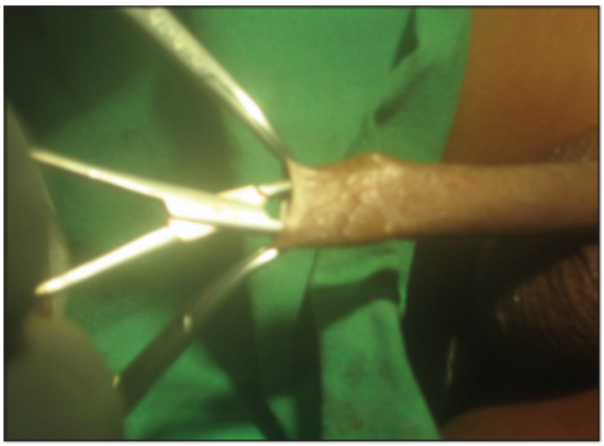

Figure 1: Dilating the preputial orifice and separating adhesions

Figure 2: Glans penis freed and prepuce everted

Figure 3: Circumferential knife skin mark

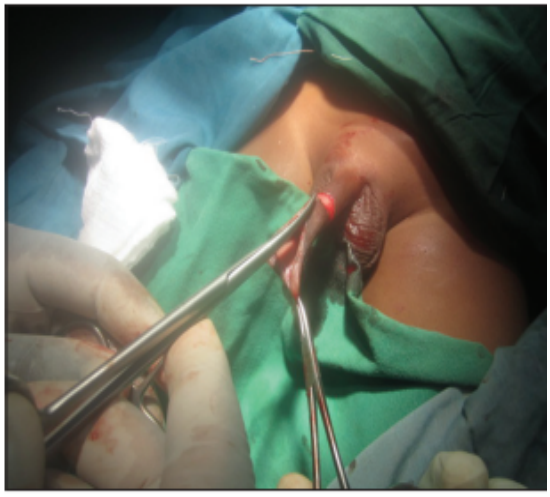

Figure 4: Crushed prepuce dorsally

Figure 5: Dorsal slit

Figure 6: Circumcised penis

Discussion

Circumcision is one of the oldest and still commonest surgicalprocedure worldwide [1,2]. The aim of circumcision is to excise enough shaft skin andinner preputial mucosa (epithelium) so that the glans is sufficiently uncovered to prevent or to treat phimosis andrender the development of paraphimosis impossible [2,3,4]. A number of different techniques are fallowed to docircumcision [2,3] Grouped as

1. **Excision:** Sleeve Technique Free hand technique LASER
2. **Shield & Clamp:** Bone cutter Oblique HemostatPlastically Guaco clamp Xensxi ring etc.
3. **Dorsal slit:** Here we did sleeve circumcision with modifications and useof Bipolar diathermy [5,6]

Asepsis, Adequate excision of the outer and inner preputial skin, Hemostasis Protection of glans and urethra and Cosmosis all these principles were followed in the procedure.

The dorsal slit method requires crushing and division of the inner and the outer preputial layers dorsally. The slit is extended to the corona. This enables the prepuce to be freed completely and excised, under direct vision. The sleeve method involves excision of the two preputial layers under direct vision, starting with the outer layer to allow for hemostasis by ligating the bleeding vessels.

Use of Bipolar diathermy is very useful and almost bloodlessprocedure It also reduces the operative time reasonably.[5,6]

Depend on the frenal adhesions we do frenal slide and simplesuturing. We take 8 – 9 simple sutures at 12, 6,3 & 9 'O'clock and 4 to 5 sutures in between to make outer and inner layer alignment.[5,6] The dressing is removed after 24 hours Wound is inspected;we note that there is mild to moderate edema (Table 3) [7,8,9,10] which subside. No further dressings in all patients We advocate to keep wound open and to apply local 5% povidone iodine solutionlocally 4 to 5 times in a day with all aseptic precautions for 5to 7 days. Almost all patients the intra and post operative period uneventful due to check list. Those

patients with preputial adhesions required longer timeparticularly in adult as compared to children.

Wound oedema is seen in first 24 hours which was mild andwithout pain or discomfort which did not require any dressings or treatment and subsides within 12 to 24 hours Counselling of patients or parents is the key factor. No intra operative or post operative bleeding in any patient. Kayaba grading of the preputial narrowing doesn't impact theoutcome except wound and glans oedema.[8,9] Skin bridge or wound healing gap or wound dehiscence seen in nine adult patients only and that to be due to associated comorbid conditions like diabetes, hypertension, IHD etc. Urinary tract infections seen in the follow up exam and review in 12 adult patients due to comorbid conditions andassociated chronic cystitis, prostatitis or upper tract insult.[8,9,10] No pediatric patients had UTI because they all undergone screening USG, repeated urine examinations.[8,9] Any patient having asymptomatic bacteriuria had preoperative urine culture, colony count and accordinglyantibiotic prophylaxis.[8,9,10] No patient had Redo procedure or second look in to OT withfollow up of 1year

Conclusion

The ultimate aim of any method of circumcision is that it should be safe and complication free. It should therefore be done by those trained to do it. Where nonexperts are to be involved, they should be trained, certified, and be monitored regularly. Circumcision is often considered as a minor procedure and most often delegated to junior surgical staff or trainee. The complications from circumcision could sometimes be more when compared with more complex urological procedures. Therefore circumcision should be performed by experts and should not be left to the junior staff or trainee. The sleeve circumcision with modification and use of bipolar diathermy shown very safe outcome, negligible complications with very good cosmetic results. The preoperative evaluation, stand by qualified anesthetic, standard protocol and check list is the key factors of success.

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