ORIGINAL RESEARCH PAPER
Volume - 12 | Issue - 06 | June - 2023 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

ROLE OF APPLICATION OF TOPICAL STEROIDS IN MANAGEMENT OF PHIMOSIS IN PEDIATRIC AGE GROUP

General Surgery

Dr. Dhruvesh Sheth Assistant Professor, Narendra Modi Medical College, Maninagar, Ahmedabad.
Dr. Nirmal Patel Resident Doctor, Second Year, Narendra Modi Medical College, Maninagar, Ahmedabad.
Dr. Dhimant Chaudhary Resident Doctor, First Year, Narendra Modi Medical College, Maninagar, Ahmedabad.

ABSTRACT

Background and Objectives: Phimosis is nonretraction of prepuce. It is normally seen in younger children due to adhesions between prepuce and glans penis. It is termed pathologic when nonretractability is associated with local or urinary complaints attributed to the phimotic prepuce. Physicians still have the trouble to distinguish between these two types of phimosis. This ignorance leads to undue parental anxiety and wrong referrals to urologists. Circumcision was the mainstay of treatment for pathologic phimosis. With advent of newer effective and safe medical and conservative surgical techniques, circumcision is gradually getting outmoded. Parents and doctors should a be made aware of the noninvasive options for pathologic phimosis for better outcomes with minimal or no side-effects. Also differentiating features between physiologic and pathologic phimosis should be part of medical curriculum to minimise erroneous referrals for surgery. **Methods:** Study was conducted on patients that presented in Narendra Modi Medical College (L. G. Hospital, Maninagar, Ahmedabad) the period of 2 years, May 2022 to April 2023 of a total 82 cases. Case selection was done by detailed history, clinical examination, treatment consisted of the application of topical steroid three times a day, particularly at night before going to bed and followed up regularly at 1 week, 2 week and 1 month in necessary individuals. Routine investigations and other investigation protocols according to the further management were duly carried out. **Results:** 85% of patients had physiologic phimosisand 9% presented with pathological or acquired Phimosis. Most common symptom was irretractability 93%, and ballooning 35% as symptoms.83% of patients were willing to undergo conservative line of management as first line of treatment, though 22% defaulted with poor adherence to therapy.51 out of 53 patients who completed the course (96%) achieved success with conservative line of treatment. Only 2 failures was seen (4%). 72.5% patients who underwent conservative line of treatment responded successfully within 2 weeks of treatment. 27.5% patients took 1 month of therapy to be successful. **Conclusion:** Topical steroid for the treatment of phimosis is a safe, simple, and inexpensive procedure that avoids surgery and its associated risks. It is effective both in primary and in secondary phimosis. The importance of proper and regular foreskin care is the main mechanism of action of the steroids

KEYWORDS

Circumcision, Phimosis, Topical Steroi.

INTRODUCTION:

The prepuce is an integral, normal part of the external genitalia that forms the anatomical covering of the glans penis and clitoris.[1,2] The outer epithelium has the protective function of internalizing the glans (clitoris and penis), urethral meatus (in the male) and the inner preputial epithelium, thus decreasing external irritation or contamination. The prepuce is a specialized, junctional mucocutaneous tissue which marks the boundary between mucosa and skin. The male prepuce also provides adequate mucosa and skin to cover the entire penis during erection.[3,4,5]

Ritualistic circumcision involves the involuntary removal of normal, healthy genital tissue from infants and children for religious, societal or theoretical medical benefits.[6]Circumcision is frequently performed in India for medical and religious reasons, although in a variety of locations around the world, such as Europe and Americas, this procedure is not done on a routine basis.[7,8]Medical reasons, for which when circumcision is done are usually due to Pathological rea- sons.[9] Pathological phimosis results when there are adherences to the fibrotic foreskin ring that makes it impossible to expose the penis glans. This situation hinders adequate penis hygiene, which favors the occurrence of foreskin infections, repeated urinary tract infections, sexually transmitted diseases and, in adults, carcinoma of the penis.[10,11]

The correction of phimosis in infancy is performed with general anesthesia, a procedure that is not without risks, with a complication rate that may reach 34%. The main complications following circumcision are hemorrhage, stenosis of the urethral meatus and the foreskin ring leading to paraphimosis, and even amputation of the glans. In addition, this procedure presents considerable costs.[12,1

Recently, clinical treatment of phimosis using topical corticosteroids has been proposed as an alternative to surgery with good results regardless of the patient's age, the results are encouraging, with success rates ranging from 67 to 95% of cases.[14,15]

Aims of the Study:

- Evaluate Relevance of topical steroids as a treatment modality in Phimosis in pediatric Age group (2-12 yrs)
- Correlate foreskin anatomy and degree of foreskin retractability with use of topical steroids

Objectives of the Study:

The objective of this work is to correlate topical treatment of 0.05% betamethasone in the stenosed foreskin with the different degrees of exposure of the glans and the length of application needed for the foreskin to become fully retractable.

Selection Criteria:

Inclusion Criteria:

- Patient with phimosis in the age group of 2 to 12 years presenting to the OPD of Surgery.

Exclusion Criteria:

- Children below 2 years of age
- Patients above 12 years of age
- Patient who failed to comply on follow up
- Patients with associated external genitalia deformities.

METHODOLOGY:

82 patients of phimosis selected into the study group. Counseling of parents done and treatment modalities explained. Treatment consist ed of the application of topical steroid three times a day, particularly at night before going to bed. The parent was shown how to apply the cream to the pink tip of the foreskin with gentle massage. No attempt was made to insert it internally. The cream used was ***betamethasone 0.5%.*** Follow up taken after 1 week and 2 weeks. Those with no improvement were given further therapy for another 2 weeks and follow up taken at the end of 1 month of therapy. Successful therapy accounts for the patients cured with steroid therapy at the end of one month.

RESULTS AND DISCUSSION:

In our study range of age was between 2 to 12 years with the highest incidence observed (51) was in the more than 7 years group (62%) though physiological phimosis should have had a higher incidence in

lower age groups.85% of patients had physiologic phimosis and 9% presented with pathological or acquired Phimosis. Most common symptom was irretractability 93%, and ballooning 35% as symptoms.

Treatment Mode- Surgical vs Conservative

51 out of 82 (62.20%) were successfully treated by conservative method. The remaining 31 were treated by circumcision including elective, failure of conservative treatment and defaulters.

Table 1 Conservative management

Treatment		No of cases	Percentage
Completed	Successful	51	75%
	Failure	2	2.94%
Defaulter		15	22.06%
Total		68	100%

A total of 68 patients were started on topical steroid therapy out of the 82 patients, of which 53 patients completed conservative line of management for a period of one month. In present study 51 out of 53 patients (96%) gave positive result with complete retractability and thus labeled successful, 2 patients even after 1 month of treatment failed to respond (2.4%) and both these patients were infants with pin hole meatus. Another 15 patients out of 68 were started with conservative management but defaulted either with wrong schedule or wrong method or later opted for circumcision before the follow up period of 1 month and were thus termed as defaulters (22%).

Surgical Management

A total of 31 of 82 were managed surgically. Out of this, 14 were elective mostly due to religious belief and social practice (45%), 15 were defaulters and thus managed surgically (48%). 2 out of the 31 were due to failure of conservative line of treatment at the end of 1 month of follow up.

Table 2 Conservative treatment timeline

Duration	No of cases	Percentage
1 week	9	17.65%
2 week	28	54.90%
1 month	14	27.45%
Total	51	100%

9 out of the 51 patients (17.65%) responded within the first week of treatment.14 (approx 27%) patients took about a month of therapy to respond. About 72.5 % that is 28+9(37) of 51 patients responded after 2 weeks of treatment.

CONCLUSION:

Topical steroids could be used as a first-line treatment for pathologic phimosis and is a viable option prior to surgery. Surgical measures are to be reserved for recalcitrant phimosis that fails to respond to medical management.

The study has shown that 96% of boys with phimosis can be successfully treated conservatively. In the current social climate where neo- natal circumcision is less frequently performed than previously, this provides another important modality of treatment. Most parents, having made the decision not to have their newborn male baby circumcised, are understandably even more reluctant to agree to it in later years. They not only recognize the discomfort the child suffers from circumcision, but the necessity of the procedure makes the parents feel that the original decision was wrong, thereby disadvantaging their son.

Thus, Provided that there is good adherence to the therapy modality the success of this method is quite high. Though this is not so in the case of elective circumcision which is governed more by religious beliefs and social practices and conservative line of management finds no role

REFERENCES

1. American Academy of Pediatrics (1999). |
2. American Academy of Pediatrics. Report of the Task Force on Circumcision. Pediatrics 1989;84(4):388-91. |
3. Bailey and Love's Short practice of surgery, 25th edition, page nos 1371-1372. |
4. Baron M, Heloury Y, Stalder JF, Bureau B, Bouchot O, Auvigne J. Acquired phimosis or preputialsclero-atrophic lichen in children. J. Chir. Paris 1979; 128: 368-371 |
5. Beaugé M (1997). "The causes of adolescent phimosis". Br J Sex Med 26 (Sept/Oct). |
6. Boyle et al (2002), The British Journal of Urology. |
7. Book of Embryology – Inderbir Singh, 9th edition, pgnos 264-266. | 8. Book of Genesis, Bible. |
9. Campbell Walsh Urology, 10th edition, pages 2975-3000 |
10. Farquarhson's Textbook of operative General surgery, 9th edition, page nos 475-480. |
11. Gairdner (1949), "The Fate of Foreskin", British Medical Journal, 1949, Volume 2;1949;2:1433-7. |
12. Golubovic Z, Milanovic D, Vukadinovic V, et al The Conservative treatment of phimosis in boys. Br J Urol 1996;78(5):786-8. |
13. Huntley et al, JR Soc Med 2003, 96 (pages 449 – 451). |
14. Kelly JW, Cains GD, Rallings M, et al. Safety and efficacy of mometasonefuroate cream in the treatment of steroid responsive |
15. Kikiros CS, Beasley SW, Woodward AA. The response of phimosis to local steroid application. PediatrSurgInt 1993;:329-32