ORIGINAL ARTICLE

The effectiveness and safety of topical steroids in the treatment of phimosis: an alternative to surgical treatment

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Abstract

Objectives: To investigate the efficacy and safety of corticosteroid in boys with true phimosis.

Study design: Descriptive case series.

Patients and methods: This prospective study was conducted in Department of surgery Hayatabad Medical Complex Peshawar, from Jan 2009 to Jan 2011. We included 55 patients, age ranged from 1 to 10 years and had true Phimosis. Betamethasone (0.05%) was applied twice daily for 4 weeks and if no satisfactory results, then followed by another 4 weeks. The outcome was defined as successful if the prepuce was retractable with complete exposure of the glans after 4 to 8 weeks of treatment and there was no recurrence at 6-months follow up.

Results: Out of 55 patients, 7 were lost in follow up due to various reasons. In the remaining 48, a successful result was noted in 45 (93.75%) patients. No adverse effects such as skin thinning and atrophy, or other systemic or local side effects as a result of steroid were noted.

Conclusion: Betamethasone (0.05%) is safe and effective treatment for patients with true phimosis.

Keywords: Phimosis, Topical Betamethasone, Foreskin

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Introduction:

Phimosis is a Greek word which means the inability of the distal foreskin to retract back over the Glans penis.[1] It is of two types i.e. congenital or physiological and acquired or pathological. The congenital Phimosis occurs through a natural process in the newborn and is due to adhesions that attach epithelial layers of the inner prepuce and the glans, preventing the retraction of the foreskin. More than 90% can be retracted by the time boys enter school and almost completely retracted when they reach puberty without the need for surgical treatment.[2] Pathologic phimosis is a medical problem in children and adults, defined as a circular band of tight prepuce preventing full retraction.[3] The causes of pathologic Phimosis include dermatitis, trauma, balanitis xerotica obliterans (BXO), scarring or postoperative complication after circumcision.[4]

Parents usually bring their children stating that the child's penile foreskin could not be retracted over the glans. Other possible emergency department presentations include urinary retention, signs and symptoms of balanoposthitis, painful erection, or dyspareunia. There are two types of treatment of Phimosis, Surgical and non-surgical. The surgical treatment is circumcision which is considered the treatment of choice for boys aged >3 years with a diagnosis of phimosis. But it carries the risk of complications such as bleeding, meatal stenosis and urethrocutaneous fistulae. Several studies have suggested a new conservative approach with 0.05% topical betamethasone. As an effective and safe alternative to surgical intervention, with a success rate ranging from 67% to 95% and no side effects.[5,6]

The purpose of current study is to evaluate the efficacy and safety of topical corticosteroids for the treatment of true phimosis.

Materials and methods:

We performed a prospective study to evaluate

clinical response to a Betamethasone (0.05%) cream for patients with true phimosis. The study had been approved by the Ethical Committee of our hospital and was conducted from January 2009 to January 2011. In this study we included only those patients who had either some hematological disorder with deranged coagulation profile or their parents were reluctant for circumcision. So they were offered conservative management and were properly counseled about the treatment plan. Patients were eligible for treatment if they were 1 to 10 years old and had true Phimosis, consisting of a fibrous foreskin ring and no exposition of the glans. Patients were treated for a period of 4 weeks, twice daily. Those boys who did not respond satisfactorily within 4 weeks underwent a second course for another 4 weeks. For boys under 7 years, parents were instructed to apply a thin layer of 0.5 g of the cream applied for 30 seconds in the foreskin after mild retraction. Boys older than 7 years usually performed the retraction by themselves. The outcome was defined as successful if the prepuce was retractable with complete exposure of the glans after 4 to 8 weeks of treatment and there was no recurrence at 6-month follow up.

Results:

Out of 55 patients, 7 were excluded who lost to follow up or because of inadequate use of the cream or those who opted for circumcision. Forty five (93.75%) patients of the remaining 48 responded to topical 0.05% Betamethasone within 4 weeks while 3 (3.25%) patients were given a further trial of 4 weeks in which they showed signs of improvement. No adverse effect such as skin thinning and atrophy, or other systemic or local side effects as a result of steroid were noted.

Discussion:

Local application of 0.05% Betamethasone is an effective and safe conservative treatment for phimosis. The duration of treatment was dependent on the severity of phimosis. Topical steroids treat phimosis by three mechanisms. It causes thinning of skin and improve the elasticity of the foreskin by decreasing synthesis of hyaluronic acid, which has an antiproliferative effect on the epidermis.[7] It also inhibits the production of the mediators of skin inflammation, prostaglandins and leukotrienes.[8] Finally, it has a lubricant effect which allows boys to retract the foreskin easily.[9]

Zavras N et al[10] treated a total of 1185 boys with a diagnosis of phimosis, with fluticasone proprionate 0.05%. Successful results were achieved in 1079 (91.1%) patients including boys with mild balanitis xerotica obliterans. No side effects were noticed. The study of Zavras N et al is comparable with our study. Elmore JM et al [11] also have proved the therapeutic effects of topical steroids for phimosis in children younger than 3years.

Using stronger topical steroids may carry a higher risk of adverse effects, including iatrogenic Cushing syndrome, adrenal suppression, delayed growth and skin atrophy, which have been observed in children treated with topical or intranasal steroids.[12,13] Thus, it is practical to use moderately potent steroids first, since they are suggested by our study to be as effective as highly potent steroids. As in other studies of topical steroid in phimosis,[14-17] we found no adverse effect with moderate potent steroid. Moreover in literature the use of non steroidal anti inflammatory ointments have also been recommended for the treatment of phimosis and can be used as an alternative to surgery and topical steroid application. Kemal M et al had conducted a study on 32 patients and achieved satisfactory results in 24(75%) cases[18].

Conclusion:

Betamethasone (0.05%) is a highly effective and safe short-term treatment for phimosis with successful results just within 4 weeks in majority of patients.

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