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The conservative treatment of phimosis in boys

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Objective To further test the application of topical steroids in boys referred to a paediatric surgical practice with pathological, non-retractable foreskins diagnosed as phimosis.

Patients and Methods This prospective study comprised two groups of 20 boys each (mean age 4.1 years, range 3-6) diagnosed as having phimosis, twice daily, a topical steroid (0.05% betamethasone cream) was applied on the narrowed preputial skin in the first group and a neutral cream (Vaseline) in the second (control) group. Patients were treated for 4 weeks and the retractability of the foreskin and any side-effects assessed.

Results Good retraction of the foreskin was achieved in 19 patients with betamethasone cream and the response was unsatisfactory in 16 patients from the control groups; these 16 boys and one 6-year old boy treated with betamethasone were circumcized. There were no side-effects or problems after the application of either cream.

Conclusion Treatment with 0.05% betamethasone cream is a simple and safe method for the treatment of phimosis in boys older than 3 years. An early operation is necessary in cases of genuine phimosis when 1 month of treatment with topical steroids has failed. We strongly support the saying, `The fortunate foreskin of an infant boy will usually be left well alone by everyone but its owner'.

Keywords Phimosis, conservative treatment, topical steroids, children.

Introduction

The suspicion of phimosis in boys is more frequent than its real occurrence: the diagnosis of phimosis is often used for different non-obstructive conditions of the

foreskin, e. g. preputial adhesions or a tight prepuce[1]. Typically, the foreskin is unretractable at the time of birth but this condition generally resolves in the first 4 years of life[2]. The incidence of phimosis decreases from 8 to 1% in adolescence[3] and surgery has been the only treatment for boys aged >3 years with a diagnosed phimosis[4,5]. Recently, topical steroids were introduced as an alternative treatment for phimosis [6] and the present study examined the effectiveness of betamethasone in a prospective trial.

Patients and methods

Between October 1994 and October 1995, 40 boys (mean age 4.1 years, range 3-6 were included in a prospective study of the efficacy of 0.05% betamethasone cream in the treatment of phimosis. Phimosis was defined as an unretractable foreskin with no adhesions but with a circular band of constriction making complete retraction impossible. (Fig. 1)

Two groups of 20 boys each were prospectively assessed in a double-blind, ramdomised trial: the first group of patients was treated with betamethasone cream applied on the narrowed

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[Photograph]

Fig. 1 A typical phimosis of the foreskin before treatment.

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preputial skin and the second (control) placebo group treated with neutral cream (Vaseline). The parents were instructed to apply a thin layer of cream on the child's foreskin, from the coronal groove to the meatus, twice daily for 4 weeks. They were asked not to attempt to retract the foreskin during the first two weeks of treatment, but after this period the narrowed foreskin becomes soft and elastic and parents were encouraged to then retract the foreskin gently and gradually.

The patients were considered cured if the foreskin was fully retractable at 4 weeks, and the outcome was also determined 1, 3, and 6 months after treatment. The protocol was not repeated and those patients not cured after 4 weeks of therapy were referred for surgery. All the patients were examined at 1, 14, and 28 days after the start of treatment and the cortisol levels assessed using a blood spot test (Soft Touch, Boehringer, Mannheim, Germany) 1 h after the morning application of cream.

Results

The results were assessed after a mean follow-up of 10.5 months (range 6-18); no local or systemic side-effects occurred after treatment. Good retraction of the foreskin was achieved in 19 patients treated with betamethasone cream (Fig. 2) but the response was unsatisfactory in 16 patients from the control group

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[Photograph]

Figure 2. A fully retractable foreskin obtained after treatment with 0.05% betamethasone cream for 4 weeks.

(P<0.001); these 16 boys and one 6 year old boy from the treated group were circumcized. A histological examination by one pathologist confirmed lichen sclerosis et atrophicus in four excised foreskins, non-specific chronic inflammatory infiltrate in 11 and normal skin in two.

The mean (sd) amount of cream applied per patient per treatment was 9.5 (3.2)g. giving a mean (sd) 47.5 (16) mg of active substance applied topically per patient per treatment or 1.53 mg. daily. The mean (sd) morning bloodspot cortisol levels were not significantly different between the two groups, at 271.1 (39.13.) nmol/T. in those treated with betamethasone and 295 (41.1) nmof/L in the control group (P=0.958).

Discussion

Congenital physiological phimosis regresses spontaneously in the first years of life but unfortunately this resolution is difficult to predict [7,8]. Although the symptoms in the present patients were ambigious and generally mild, the main reason for presentation of such patients to a paediatric surgical practice is the concern of their parents[9]. The Christian orthodox and most other European cultures prefer to leave the foreskin intact and thus circumcision is not accepted easily unless unavoidable. Therefore, in the present study, the parents were usually pleased when a conservative treatment with topical steroid was proposed.

The histological assessment of the excised foreskins from circumcised patients showed findings similar to those reported previously[10,11] and the present results using topical steroids agree with those published previously [6,12-14]. There were no local or systemic side-effects after treatment with topical steroid; 0.05% betamethasone cream applied to the foreskin involves <0.1% of the total body area and thus such effects are very unlikely.

In summary, treatment with a topical steroid is a simple, safe and painless method for the treatment of phimosis in boys older than three years. We strongly support the saying, "the fortunate foreskin of an infant boy will usually be left alone by everyone but its owner.[8]

References

1. Krolupper M. [Care of foreskin contriction in children]. *Oesk Pediatr* 1992: 47:664-5 [PubMed]
2. Gairdner D. The fate of the foreskin. A study of circumcision. *Br. Med J* 1949: 2:1433-7
3. Oster J. Further fate of the foreskin. *Arch Dis Child* 1968: 43:200-3
4. de Castella H. Prepuceplasty: an alternative to circumcision. *Ann R Coll Surg Eng* 1994: 76: 257-8
5. Leal MJ, Mendes J. [Ritual circumcision and the plastic repair of phimosis]. *Acta Med Port*. 1994: 7: 475-81 [PubMed]
6. Jorgensen RT, Svensson A. The treatment of phimosis in boys with a potent topical steroid (clobetasol propionate 0.05%) cream. *Acta Derm Venereol* (Stockh) 1993; 73:55-56.
7. Schlittenhardt S. [Phimosis and balanitis - guidelines for care]. *Kinderkrankenschwester* 1993: 12: 77
8. Wright, JR. Further to `the further fate of the foreskin.' Update on the natural history of the foreskin. *Med J Aust* 1994: 160: 134-9.
9. Matsuoka H, Kajiwara I. Tahara H. Oshima K. [Phimosis as a pathogenic factor in urinary tract infection and vesicouteral reflux.] *Nippon Hinyokika Gakkai Zasshi* 1994: 85: 953-7 [PubMed]
10. Chalmers RJG, Burton PA, Goring CC, Smith PJB. Lichen slerosus et atrophicus. *Arch Dermatol* 1984: 120: 1025-7 [PubMed]
11. Meuli M. Briner J. Hardmann B, Sacher P. Lichen sclerosus et atrophicus causing phimosis in boys:

a prospective study with 5-year follow-up after complete circumcison. *J. Urol* 1994: 152: 987-9 [PubMed]
12. Wright JE. The treatment of childhood phimosis with topical steroid. *Aust N Z J Surg* 1994: 64: 327-8.
13. Dukia D. Agarwal R. Treatment of childhood phimosis with topical steroid [letter]. *Aust N Z J Surg* 1995; 65: 57-8
14. Sinha S, Babu MV. Treatment of childhood phimosis with topical steroid [letter]. *Aust N Z J Surg* 1994: 64: 861

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