

The Treatment of Phimosis in Boys, with a Potent Topical Steroid (Clobetasol Propionate 0,05%) Cream

E. T. JØRGENSEN¹ and Å. SVENSSON²

¹Department of Dermatology and Venereology, Central Hospital Kalmar and ²Central Hospital Kristianstad, Sweden

In an open trial, including 54 boys with phimosis, treatment with clobetasol propionate cream (Dermovate®, Glaxo, UK) was shown to be effective, without side effects. Surgery, the treatment of choice in many centres, was avoided in 70% of the patients.

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E. T. Jørgensen, Department of Dermatology, Länssjukhuset, S-391 85 Kalmar, Sweden.

The preputium is almost always unretractable at birth, but this congenital normal phimosis generally disappears before 4 years of age (1). However, the incidence of phimosis is 8% in 6–7-year-olds and falls to 1% in 16–17-year-olds (2).

In operated cases phimosis is caused by lichen sclerosus et atrophicus in a frequency up to 90% (3–11). To the best of our knowledge, no other *histological proven* skin disease causing phimosis in boys has been reported.

Lichen sclerosus et atrophicus on the penis was first described in 1908 by Delbanco as kraurosis glandis et praeputii (12). The term balanitis xerotica obliterans was used by Stuhmer 1928 (13), and some years later Layman & Freeman showed that balanitis xerotica obliterans and lichen sclerosus et atrophicus was the same disease (14).

Lichen sclerosus et atrophicus has been treated successfully with clobetasol propionate cream and other local steroids (15–18). The aim of this study was to investigate if clobetasol propionate cream could cure phimosis in boys.

MATERIAL AND METHODS

Between May 1985 and December 1990, 54 boys between 2 and 15 years (mean age 6.9 years) were included in this consecutive and prospective open study of patients referred for surgical treatment of phimosis.

Phimosis was defined as unretractable foreskin without adhesions and/or a circular band of tight prepuce skin making complete retraction impossible.

At 4 years of age about 10% of boys have adhesions of the foreskin to the glans penis (1). Patients with this problem were not included in this study. This was the only exclusion criterion.

Treatment was given with clobetasol propionate 0,05% (Dermovate®) cream. Parents were instructed to apply the cream in a thin layer on the outside of the prepuce from the distal margin to the corona glandis once daily. Attempts should be made to retract the foreskin and in such way dilate it as much as possible without pain.

The patient was seen after 1 month of treatment. If phimosis persisted, the treatment was continued and the patient was examined each month up to a maximum treatment of 3 months. Patients were regarded as cured if the prepuce was fully retractable.

Patients not cured after 3 months of treatment were referred to the surgical department.

In June 1991 a letter was sent to all parents of the boys whose

phimosis had disappeared on treatment with the local steroid cream only. The parents were asked if the patients were still symptom-free or if an operation had been performed after the last visit. Two parents, who did not answer the letter, were asked the same questions on the telephone.

RESULTS

Local treatment with clobetasol propionate was successful in 38 of 54 boys. For these cured patients the mean follow-up time was 3.9 years (range 0.8–5.6 years). The mean time of treatment was 49 days. Nobody showed skin atrophy or other side effects at the end of the treatment period.

In 4 patients the phimosis was caused by a highly sclerotic prepuce, regarded as typical of lichen sclerosus et atrophicus. Of these 4 patients 3 were cured with clobetasol propionate.

After 3 months of treatment with clobetasol propionate cream 16 boys showed persistent phimosis and were referred to the department of surgery. Of the excised prepuces 3 were histologically examined, all showing lichen sclerosus et atrophicus.

No significant difference in the age distribution was found between those who responded and those who did not respond to the steroid treatment (Fig. 1).

DISCUSSION

This study has, to the best of our knowledge, for the first time shown that local steroid application is an effective treatment of phimosis in boys. The main symptoms of the patients were the same as in others, i.e. recurrent infections, pain when urinating, difficulty in directing the stream of urine and the foreskin blowing up like a balloon leaving urine in the trousers (3). Congenital phimosis does disappear spontaneously in-

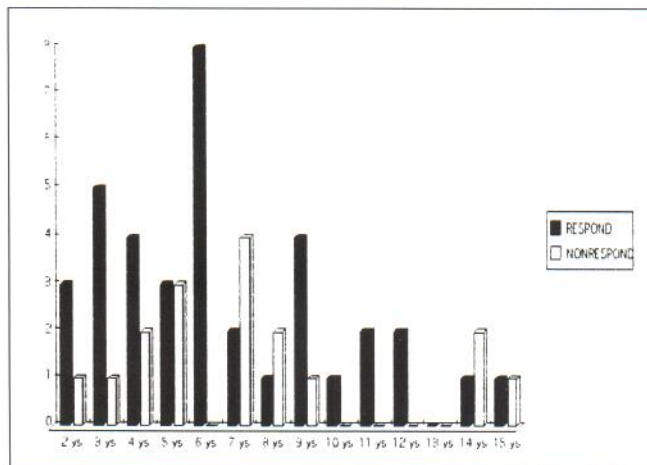


Fig. 1. Age distribution of the two groups of patients.

many cases even after 4 years of age (1, 2), but this spontaneous resolution takes several years and it is impossible to predict which phimosis will resolve and when. All the patients had or had had symptoms and the parents claimed some form of treatment instead of an uncertain expectation. Since there is no tradition in Sweden for circumcision the parents were very pleased to try a local steroid application instead of surgery.

All patients were also instructed to retract the prepuce as much as possible without pain. Öster (2) has suggested that such a procedure could have caused phimosis to progress in 3 out of 1968 boys. In our comparatively small group nobody experienced such a deterioration. Further studies are needed to reveal the effect of the mechanical manipulation involved in the treatment procedure.

In our material only 4 patients showed lesions that by examination could be classified as lichen sclerosus et atrophicus. Since the study was designed to avoid surgery, no biopsies were taken for histologic examination. In a study by Chalmers et al. (8) 14 of 100 boys treated for phimosis had lichen sclerosus et atrophicus according to histologic examination. In another 10 patients the histologic examination showed a non-specific chronic inflammatory infiltrate. They stated that the clinical symptoms were almost the same in all patients, although more pronounced in the group with lichen sclerosus et atrophicus.

Clemmensen et al. (19) made a histologic investigation of the prepuces of 78 patients operated upon because of phimosis. In 15 patients the histologic examination was compatible with lichen sclerosus et atrophicus, in 27 non-specific and in 36 normal. No correlation was found between the clinical and the histologic changes.

It is not known if lichen sclerosus et atrophicus can disappear spontaneously, like congenital phimosis. Lichen sclerosus et atrophicus lesions start with a slight redness (20), and because the inside of the preputium is always red it is impossible to diagnose early lichen sclerosus et atrophicus without biopsy. The study has not revealed why some patients do not respond to the steroid treatment.

The treatment with clobetasol propionate is simple and showed no atrophy or other side effects in our material. Therefore it should be the first choice of treatment used for boys with problems of phimosis.

REFERENCES

- Gairdner D. The fate of the foreskin. A study of circumcision. *Br Med J* 1949; 2: 1433-1437.
- Öster J. Further fate of the foreskin. *Arch Dis Child* 1968; 43: 200-203.
- Bale PM, Lochhead A, Martin H, Gollow I. Balanitis xerotica obliterans in children. *Pediatr Pathol* 1987; 7: 617-627.
- Laymon CW. Lichen sclerosus et atrophicus and related disorders. *Arch Dermatol Syph* 1951; 64: 620-627.
- Post B, Jänner M. Lichen sclerosus et atrophicus penis. *Z Hautkr* 1975; 50: 675-681.
- Flentje D, Benz G, Daum R. Lichen sclerosus et atrophicus als Ursache der erworbenen Phimose-Zirkumzision als Präventivmassnahme gegen das Peniskarzinom?. *Z Kinderchir* 1987; 42: 308-311.
- Buchanan JD, Catterall MD, Briggs PC. Posthitis xerotica obliterans. *JR Nav Med Serv* 1979; 65: 136-139.
- Chalmers RJG, Burton PA, Bennett RF, Goring CC, Smith PJB. Lichen sclerosus et atrophicus. *Arch Dermatol* 1984; 120: 1025-1027.
- Rickwood AMK, Hemalatha V, Batcup G, Spitz L. Phimosis in boys. *Br J Urol* 1980; 52: 147-150.
- Höfs VW, Quednow C. Spezielle klinische Beobachtungen zum Lichen sclerosus et atrophicus. *Dermatol Monatsschr* 1978; 164: 625-632.
- Loening-Baucke V. Lichen sclerosus et atrophicus in children. *Am J Dis Child* 1991; 145: 1058-1061.
- Delbanco. Kraurosis glandis et praeputii penis. *Arch Derm Syph* 1908; 91: 384.
- Stuhmer A. Balanitis xerotica obliterans (post operationem) und ihre Beziehungen zur "Kraurosis glandis et praeputii penis". *Arch Derm Syph (Berlin)* 1928; 156: 613-623.
- Laymon CW, Freeman C. Relationship of balanitis xerotica obliterans to lichen sclerosus et atrophicus. *Arch Dermatol Syph (Chicago)* 1944; 49: 57-59.
- Dalziel KL, Millard PR, Wojnarowska F. The treatment of vulval lichen sclerosus with a very potent topical steroid (clobetasol propionate 0,05%) cream. *Br J Dermatol* 1991; 124: 461-464.
- Fortier-Beaulieu M, Thomine E, Mitrofanof P, Lauret P, Hemet J. Lichen scléro-atrophique préputial de l'enfant. *Ann Pédiatr (Paris)* 1990; 37: 673-676.
- Meyrick Thomas RH, Ridley CM, Black MM. Clinical features and therapy of lichen sclerosus et atrophicus affecting males. *Clin Exp Dermatol* 1987; 12: 126-128.
- Poynter JH, Levy J. Balanitis xerotica obliterans: effective treatment with topical and sublesional corticosteroids. *Br J Urol* 1967; 39: 420-425.
- Clemmensen OJ, Krogh J, Petri M. The histologic spectrum of prepuces from patients with phimosis. *Am J Dermatopathol* 1988; 10: 104-108.
- Braun-Falco O, Plewig G, Wolf HH, Winkelmann RK. *Dermatology*. 3rd edn. Berlin: Springer Verlag 1991: 826.