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Betamethasone Cream for the Treatment of Pre-Pubertal Labial Adhesions

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Abstract. *Purpose:* We evaluated the efficacy of 0.05% betamethasone cream for the treatment of pre-pubertal labial adhesions.

Methods: We retrospectively reviewed the records of 19 children with labial adhesions who were treated with betamethasone cream from 6/2001 to 3/2003. Children were treated with 1 to 3 courses of twice-daily 0.05% betamethasone cream for 4 to 6 weeks. Successful lysis of adhesions was assessed by clinical exam or parental phone contact and outcomes were defined as: (1) success—complete separation of labia, (2) partial success—greater than 75% separation, (3) progression to surgical lysis, and (4) lost to follow-up.

Results: Nineteen patients with an average age of 58 months (range 12 to 132 months) were treated. Four of the 19 patients had never been treated previously and 1 had been treated previously with surgical lysis of adhesions only. Fourteen of the 19 patients had been previously treated with conjugated estrogen (Premarin) cream. Two of these fourteen patients had also undergone surgical lysis of adhesions. Severity of adhesions ranged from 33% to 99% labial closure. Betamethasone cream was successful in treating 13/19 (68%) pre-pubertal labial adhesions. Eleven (85%) of these 13 patients had complete resolution of labial adhesions with 1 course of treatment, 1 (7.5%) had resolution with 2 courses of treatment and 1 (7.5%) had resolution with 3 courses of treatment. One patient had a partial success with 3 courses of betamethasone cream. Two (11%) patients underwent surgical lysis of adhesion after 1 and 2 courses of betamethasone cream respectively. Three (16%) patients were lost to follow-up. Average follow-up was 7 months (range 1–24 months). No adverse outcomes or untoward effects were noted in any of the patients treated.

Conclusions: Betamethasone 0.05% cream appears to be a safe and effective treatment of pre-pubertal labial adhesions as primary therapy or in patients that have failed previous therapies and it may avoid the undesirable side effects of breast budding and hyperpigmentation that can be associated with Estrogen creams.

Key Words. Betamethasone—Labial adhesions—Pre-pubertal—Pediatrics

Introduction

Labial adhesions are a common, usually asymptomatic, finding in 0.6–5% of pre-pubertal girls,[1–3] although some studies report that it affects up to 38.9% of pre-pubertal girls to some degree.[4] Many labial adhesions are asymptomatic and may not come to the attention of the medical community. The cause of labial adhesions is unclear, but conditions that lead to chronic irritation of the vulva in the hypoestrogenic girl are believed to be important.[5] Local irritation likely leads to epithelial sloughing of the labia minora and the labia adhere and re-epithelialize forming an avascular membrane between the two labia. Labial adhesions may present with symptoms such as urinary retention, urinary tract infection, pain, or altered urinary stream.[2] Treatment is usually instituted in the case of symptomatic adhesions or if parental concerns about genital appearance demand intervention.[2] Initial treatment of labial adhesions traditionally has consisted of estrogen creams, with twice-daily application of the cream along with gentle traction.[2] Success rates with estrogen cream application range from 50% to 88%.[5–7] Surgical lysis of labial adhesions is usually reserved for refractory cases unresponsive to conservative therapy. Estrogen creams, however, can have untoward side effects, such as breast budding, labial engorgement, and hyperpigmentation.

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Topical steroid creams, in multiple studies, have been demonstrated to be a highly effective, non-surgical, treatment of phimosis in young boys.[8–10] Most studies have utilized twice-daily retraction of the foreskin with application of 0.05% betamethasone cream, a corticosteriod, to the tightest part of the prepuce. Success rates have ranged from 67% to 95% in pre-pubertal boys,[11–14] and 92% in boys younger than 3 years of age.[10] In these studies there were no noted untoward effects or adverse outcomes associated with the use of betamethasone cream.[10,15] We retrospectively reviewed the effectiveness of 0.05% betamethasone cream, applied twice daily, in the treatment of pre-pubertal labial adhesions.

Materials and Methods

We retrospectively reviewed all pre-pubertal patients referred to our urology clinic with labial adhesions who were treated with 0.05% betamethasone cream starting in June 2001. A total of nineteen children were identified. The details of the patient's characteristics are summarized in table 1. The severity of adhesions ranged from 33% to 99% closure of the introitus and was assessed by the clinician at time of the initial exam. Previous treatments such as surgical lysis of adhesions or conjugated estrogen cream application were determined by chart review. The number of previous premarin courses was also recorded. These courses were typically 1 to 2 weeks in duration. Four patients had no previous treatment, 12 had been previously treated with an average of 2.75 courses of conjugated estrogen cream (range 1–7), 1 patient with surgical lysis of adhesions alone, and 2 with both premarin cream and surgical lysis.

Parents of patients were instructed to apply a thin layer of 0.05% betamethasone cream twice daily to the raphe along the adhesion line. Courses of therapy were 4 to 6 weeks in duration. All children were treated with 1 to 3 courses. Outcomes were stratified into several categories: successful, partially successful, requiring surgical therapy, or lost to follow-up. The successful category was defined as complete separation of the labia. Partial success encompassed adhesions that demonstrated greater than 75% separation of labia. Patients whose lesions did not respond to topical betamethasone therapy or whose parents elected surgical therapy after first undergoing topical therapy were placed into the surgical category. Those patients for whom no follow-up could be obtained, in clinic, by mail or by phone, were placed into the lost to follow-up category.

Results

Nineteen patients with an average age of 58 months (range 12 to 132 months) were treated. Their characteristics are summarized in table 1 and our results in

Table 1. The age of the nineteen patients treated, types of previous treatments, percent closure at initial presentation (if known), follow-up period, in months, since initiation of therapy, outcomes, and total number of 0.05% betamethasone courses (4 to 6 weeks per course) applied

Age at diagnosis (Years)	Previous treatments	Severity Closure	Follow-up (Months)	Result	Number of Courses
1	None	90%	3	Success	1
10	None	50%	11	Success	1
4	Premarin x1	95%	8	Success	1
4	None	50%	2	Success	1
7	None	33%	12	Success	1
4	Premarin x 1	Not known	8	Success	1
3	Premarin x 6	50%	3	Success	1
5	Premarin x 4	99%	4	Success*	1
3	Premarin x 3	75%	2	Success*	1
2	Premarin x 1	80%	1	Success	1
3	Premarin x 2	Not known	5	Success†	1
4	Premarin x 1, then surgical lysis	95%	24	Success	2
3	Premarin x 4	66%	2	Success	3
1	Premarin x 1	90%	3	Partial Success	3
4	Premarin x 7	99%	3	Surgical Lysis	2
2	Premarin x 2	99%	10	Surgical Lysis	1
6	Premarin x 1, then surgical lysis	99%	none	Unknown	? 1
11	Surgical lysis	75%	none	Unknown	? 1
7	Premarin x 1	Not known	none	Unknown	? 1

Premarin = conjugated estrogen.

*2 patients had complete resolution and then had small amount of closure and parents elected to continue to follow their daughters.

†1 patient had a small recurrence which resolved when parents gave their daughter another course of betamethasone.