

Labial adhesion and bacteriuria

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Abstract

Objective: The purpose of this study is to evaluate the clinical presentation, laboratory findings, and response to treatment in girls with labial adhesion younger than 23 months.

Material and Methods: A retrospective chart review of all girls younger than 23 months with the diagnosis of labial adhesion was referred to Dr Sheikh children's clinic in Mashhad in northeast Iran between 1998 and 2013.

Results: Sixty-three patients were diagnosed with labial adhesion during the review period. Most patients were diagnosed by physicians during the physical examination or during the evaluation for their voiding problems. The most prevalent symptom among patients was dysuria and restlessness while voiding. Twenty-one (33.3%) patients had a history of urinary tract infection. 17 (26.9%) patients had sterile pyuria and 69.8% showed presence of bacteria in their urine samples.

Conclusion: Physicians may frequently encounter pre-pubertal girls whose urinalysis may show sterile pyuria or presence of bacteria with colony counts <105 in the absence of urinary tract infection symptoms. In these cases, labial adhesion should always be suspected and genital examination should be performed. (J Turk Ger Gynecol Assoc 2015; 16: 68-9)

Keywords: Labial adhesion, bacteriuria, urinary tract infection, topical estrogen

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Introduction

Labial adhesion is a common pediatric gynecological problem which occurs in 0.6%–5% of pre-pubertal girls (1). Its prevalence may be even greater because many patients with this condition are asymptomatic and may go undetected. Its peak incidence is between 3 and 23 months and is rarely observed after the age of 6 years (2).

Although the exact etiology of labial adhesion is not known, it is probably associated with hypoestrogenism in pre-pubertal girls (3). Vulvar inflammation and irritation due to various conditions such as vulvovaginitis, diarrhea, and dermatological problems are also a suspect (4).

Labial adhesion may be asymptomatic and is found accidentally by a physician or a caretaker or it may cause symptoms such as urinary tract infection and pain during activity, post-void dripping, and abnormal urinary stream (2, 3). It may rarely present as urinary retention (5).

Asymptomatic patients with minor adhesions may need no treatment, and they can only be observed because this condition can resolve spontaneously, particularly with the onset of puberty and the resultant estrogen production (4). Symptomatic patients and those with a complete adhesion should be treated (6). The treatment includes nonsurgical and surgical methods. Topical estrogen in combination with vulvar hygiene is generally the first-line treatment with a success rate between 50% and 88% (7, 8). The use of topical betamethasone is an alternative (8, 9), and surgical separation should be considered in refractory cases that are not responsive to conservative management (10).

Material and Methods

This research work is a retrospective study. The medical records of all children under the age of 2 years who had been admitted to Dr Sheikh Children's clinic in Mashhad, in the northeast of Iran, between 1998 and 2013, with the diagnosis of labial adhesion were reviewed. The study was approved by the medical ethics committee of Mashhad University of Medical sciences prior to the start of the study.

Sixty-three patients met the inclusion criteria and were analyzed. Demographic information included the age at the time of diagnosis and the place of residence (Table 1).

Adhesions were viewed as involving more or less than 50% of the vestibule.

Patients' symptoms and the history of urinary tract infection were also evaluated.

Patients were also evaluated for the presence of urinary tract infection and bacteriuria.

Statistical analysis

All statistical analysis was performed using SPSS for Windows, Version 16.0 statistical package (SPSS Inc., Chicago, IL, USA). The results are expressed as mean and percents.

Results

All our patients in this study were under the age of 2 years and were in diapers. Most of the patients (73%) were between 6 and 12 months. Three of the patients were diagnosed by their parents because of their abnormal genital appearance.



Table 1. Demographic characteristics of patients with labial adhesion

Age at diagnosis	1-6 months	16 (25.4%)
	6-12 months	29 (46%)
	12-24 months	18 (28.6%)
Place of residence	Urban	45 (71.4%)
	Rural	18 (28.6%)

Twenty-four patients were diagnosed by their primary care physicians and 36 patients were diagnosed during evaluation for their voiding problems.

Forty-three patients at the time of referral had adhesion of greater than 50% of the vestibular opening.

Twenty-one patients had a history of urinary tract infection and 38 patients had complaints such as dysuria or restlessness while voiding. Twenty patients had a history of altered urinary stream or post-void dripping.

None of our patients complained about urinary retention.

Urinalysis and urine culture was performed for all patients. Seventeen patients had pyuria [white blood cell (WBC) >5/hpf] in their urinalysis and the urine culture of three patients was positive for *Esherishia coli* (*E. coli*) with a colony count of >10⁵. The urinalysis of 44 (69.8%) patients showed a presence of moderate to severe bacteria.

All 63 patients were treated with topical estrogen therapy in this study. Seventeen patients responded to treatment after 2 weeks, 29 patients in 2–3 weeks, and three patients received topical estrogen therapy for >3 weeks. Fourteen patients were lost in the follow-up.

Discussion

Labial adhesion is a common urologic condition in pre-pubertal girls (1) and is considered as an acquired condition (11). Physicians may often receive referrals for the evaluation and treatment of this condition.

Patients in our study generally match those classically reported in the pediatric literature. This condition was most prevalent between 6 and 12 months, which is similar to previous studies (4, 9, 10).

All patients were treated with the traditional topical estrogen therapy. Most of them responded to this treatment. In a study, all 20 girls (up to 3 years of age) responded to treatment with estrogen therapy and had minimal recurrence rate (12). Another study from Turkey reported a success rate of 66% among 49 girls (13). Another study with 107 patients reported successful separation in 79% of patients; however, almost 40% of these patients had recurrence and needed repeated treatments (14). However, one study has reported a success rate of <50% with topical estrogen therapy; 262 girls were studied in this study and a recurrence rate of 11% was reported (15).

The patients with pyuria was 26.9%, and 69.8% showed a presence of moderate to severe bacteriuria. Leung and Robson found that asymptomatic bacteriuria is quite prevalent in girls with labial fusion and have recommended that a urine culture be performed in girls with labial fusion and girls with bacteriuria be checked for labial fusion (16), which is similar to the results of our study.

In conclusion we strongly recommend physicians to perform genital examination in girls who show sterile pyuria or significant bacteriuria in their urinalysis.

Ethics Committee Approval: Ethics committee approval was received for this study from the ethics committee of Mashhad University of Medical Sciences.

Informed Consent: This was a retrospective chart review. Informed consent was not received due to the retrospective nature of the study.

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