

Labial Adhesion in a Pubertal Girl—A Commonly Misdiagnosed Entity: A Case Report

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ABSTRACT

Labial adhesion is a gynecological condition where adhesion of labia minora occurs in the midline. It is commonly seen in the prepubertal age group, causing parental anxiety, rarely seen in postmenopausal women, and very rarely seen in the reproductive age group. Hypoestrogenism and inflammation are usually considered as a cause of labial adhesion. Many cases present with urinary symptoms leading to misdiagnosis unless a clinical examination is done. Management can be observation, medical, or surgical. Management becomes difficult in case of recurrences. We present a case of a 12-year-old pubertal girl who came to our hospital. She was misdiagnosed and was treated elsewhere as a urinary tract infection. Here she was diagnosed with labial adhesion and was treated for the same. She had recurrent adhesions which were managed appropriately.

Keywords: Labial adhesion, Labial agglutination, Labial fusion, Labial synechiae.

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INTRODUCTION

Labial adhesion is the partial or complete fusion of labia minora in the midline and is usually asymptomatic. It is an important vaginal condition occurring in 0.6–5% of prepubertal girls, more commonly between 3 months and 5 years of age, and rarely in postmenopausal women.¹ But its prevalence may be underestimated because many patients with this condition are asymptomatic and may go undiagnosed.² It is very rare among postpubertal girls and reproductive age groups due to sufficient level of estrogen.³ Treatment includes observation, medical, or surgery. Recurrence is a common problem in labial adhesions. This case is being reported in detail in view of addressing the rare entity in the pubertal girl which is often misdiagnosed, to emphasize the importance of clinical examination and discuss the management of this recurrent condition.

CASE REPORT

A 12-year-old girl was brought to our hospital by her mother, with a history of dribbling of urine, passing thin stream of urine, and dysuria since 2 months. She gave no history of sexual abuse. She had attained menarche 1 month earlier, which was normal in flow. Before reaching our hospital, she was treated as recurrent urinary tract infection elsewhere. With her mother besides, on clinical examination, the girl was moderately built and nourished, development of secondary sexual characters was corresponding to her age. On examination, her abdomen felt soft with no palpable mass. On examination of the external genitalia, labia majora was found fused from above downwards in the midline, with a small pinhole opening near the posterior fourchette. Labia minora, urethral meatus, and vaginal introitus could not be visualized. Urine flowed through the small opening. Her routine blood investigations were found to be normal. Microscopic examination of the urine showed 10–15 leukocytes/high-power-field. The urine culture was sterile. Ultrasound imaging of the abdomen and pelvis revealed normal uterus, ovaries, and kidneys. A diagnosis of labial fusion was made. Hence, examination under anesthesia and labial adhesiolysis

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was planned. The girl's mother was explained about the condition and treatment and consent was obtained for the same (Fig. 1).

Under general anesthesia, the patient was placed in a lithotomy position. Thick labial adhesions were present. Adhesions were released from above downwards. Labia minora was released. Vaginal introitus and urethral meatus were then visible. The separated mucocutaneous junction was sutured intermittently from above downwards on both sides without raw area using 5-0 vicryl. Labioplasty was completed. Cystoscopy showed turbid urine. Vaginoscopy evidenced signs of vaginitis. Post-procedure, the local dressing was done daily with a lubricated gauze piece kept in between the labia majora. Oral antibiotics were given. She was discharged and advised to apply estrogen cream, twice daily for 6 weeks and regular follow-up (Fig. 2).

The patient had re-adhesions after 2 months. Local examination revealed partial adhesion in the upper half of the labia. Gentle adhesiolysis was done under sedation and was advised to apply estrogen cream along with local hygiene. She came back with third episode of re-adhesion after 2 months. The girl was managed with manual separation under IV sedation



Fig. 1: Labial adhesion: fused labia majora with an infant feeding tube through the opening



Fig. 2: Intraoperative image of adhesiolysis and labioplasty

and local anesthesia. Bladder catheterization was done for 2 weeks. She was advised 0.5% betamethasone cream to apply twice daily for 6 weeks. Vulvar hygiene was insisted. Regular exercise like squatting and butterfly position was carried out for 3 months. She was asymptomatic at the end of 3 months and is on regular follow-up.

DISCUSSION

Labial adhesion is thought to develop during the re-epithelization of microtraumatized hypoestrogenism labial skin, vulvovaginitis, and poor local hygiene. In pre-pubertal girls, hypoestrogenism, sexual abuse/genital trauma are suggested predisposing factors.³ Our patient had no history of genital trauma or sexual abuse. Hypoestrogenism may also not be the cause in our case as she had attained menarche and had her secondary sexual characters developed.

This condition is usually asymptomatic in more than 35% of patients.⁴ But may lead to a spectrum of urinary symptoms including post-void dribbling, straining and restlessness during urination,

and recurrent urinary tract symptoms in 20–40% of patients.^{2,6} In our case also, Patient presented with urinary symptoms, was treated as a case of recurrent urinary tract infection elsewhere. This condition is commonly misdiagnosed leading to unnecessary investigations.² Diagnosis is by inspection of the vulva. On many occasions, the genital examination is missed in girls. Time and again, clinical examination proved to be critical. Generally, labial adhesions are readily apparent as thin, pale, semi-transparent membranes covering the vaginal opening between the labia minora. Our patient presented with complete synechia, which was thick. These adhesions can be confused with an imperforate hymen or a congenital malformation of the genital tract like vaginal atresia and others.² Usually, the labia start to fuse at the bottom end (posterior fourchette) and work up towards the clitoris.^{1,2} But in our case, the opening was in the lower end near the posterior fourchette.

Asymptomatic adhesions need no treatment. All symptomatic adhesions require treatment with medications or surgery along with meticulous hygiene. Medications include local application of estrogen and steroidal cream. Topical estrogen cream of about peanut size is applied once daily for not more than 6 weeks due to side effects. Studies show varying success rates ranging between 50% and 100%, depending on the duration of treatment and density of adhesions along with other factors.¹ The other option is the application of local betamethasone cream 0.05% twice daily for 4–6 weeks with promising results. The indications for surgical treatment of labial adhesions include failed medical therapy⁵ dense adhesions without a visible transparent raphe accompanied by symptoms.¹ Surgical options are manual separation or surgical incision of the adhesion depending on the density of the adhesions.² In our patient surgical separation was planned in view of thick adhesions. Post-surgical separation, local estrogen cream application was advised. In contrast to the recorded findings where there were no recurrences among the pubertal age group.¹ The patient had recurrence after using estrogen cream, ruling out hypoestrogenism as a cause and the condition improved after personal hygiene and avoidance of local irritants like soap and steroid application to handle the local inflammation, which could have been the etiology.

Recurrence rates range between 11% and 14%. In refractory cases, amniotic membrane, rotational skin graft after surgical incision has been described in the literature.¹

CONCLUSION

Labial adhesion is an important condition that is often misdiagnosed leading to unnecessary investigations in the pediatric age group. Clinical suspicion and a proper clinical examination in girls with urinary symptoms is a point to be reinforced. It is a self-limiting condition and hence asymptomatic patients need no treatment. Symptomatic patients can be treated pharmacologically or surgical along with local hygiene with varying success rates. Recurrences can occur in all modes of treatment, which has to be discussed before treatment.

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