Labial fusion first diagnosed during pregnancy with voiding difficulty and its management: a case report

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Summary

Introduction: Labial fusion is described as partial or complete adherence of the labia minora. Adhesions of the labia are extremely rare in the reproductive population with only a few cases described in the literature and none reported with pregnancy. *Case presentation:* A 24-year-old woman who had extensively fused labia with a pinhole opening at the upper midline with menstrual delay was diagnosed at six weeks of pregnancy. The case and its management are presented. *Conclusion:* The condition was treated surgically with complete resolution of the urinary symptoms.

Key words: Labial Fusion; Pregnancy; Difficulty of urination.

Introduction

Labial fusion refers to a condition from partial to complete adherence of the labia minora. Vulvar fusion and adhesions of the labia are some other names used to describe this condition as synonyms. Labial fusion, or adhesion of the labia, is an extremely rarely encountered problem among the female reproductive population and only a few cases have been reported in the literature, among which, to the best of our knowledge, there is no reported case of labial fusion with pregnancy [1, 2].

In this report, the case of a 24-year-old woman who had extensively fused labia with a pinhole opening at the upper midline is presented.

Case Report

A 24-year-old woman was admitted to our hospital complaining of menstrual delay and voiding difficulty. Serum β hCG measurement revealed pregnancy. At abdominal ultrasonography (US) six weeks of pregnancy with gestational sac was observed.

The patient had not had a gynecologic examination previously. On inspection, the labia were found to be fused extensively, with a pinhole opening at the upper midline. The external urethral meatus was not visible. Rectal examination showed normal results.

The patient presented with pseudoincontinance. She had voiding difficulty during initiation of flow and was voiding into her vaginal vault. As she voided into her vaginal vault, a considerable amount of urine collected in the vagina, leading to the dribbling of urine through a small opening in the fused labia. Voiding of the urine and also menstrual blood flow occurred through this small opening.

The woman's sexual history revealed no coitus before. It was learned that her sexual partner ejaculated near the labial opening when the patient was asked how she got pregnant. The labial fusion was separated under general anesthesia. Following adhesiolysis, a 14-F catheter was easily inserted through the urethra. Urethral meatus was found normal and there was no evidence of stricture of the urethra. The vagina was of normal depth and caliber.

Interrupted 3-0 vicryl sutures were used to bury the denuded areas on both labia minora. The patient was discharged 48 hours after the operation with no complications. She was instructed to continue sitz baths and routine perineal hygiene at home.

The condition was treated surgically with complete resolution of the urinary symptoms. The patient had a healthy ongoing gestation after the operation. However the patient's unintended pregnancy was terminated per her request at eight weeks of pregnancy. Abortion is permitted up to ten weeks of gestation in cases of unintended pregnancy under Turkish law.

Discussion

The exact incidence of labial fusion is unknown. It is not common in children and post-menopausal women, but is extremely rare in reproductive women. The peak incidence of labial fusion is estimated to be 13-23 months of age [3]. The incidence of partial labial fusion among children as reported in the literature is between 0.6% and 1.4%. Frequently occurring in the first two years of life, labial fusion may be either congenital or acquired and rarely persists beyond puberty. Adhesions of the labia are rare among the female reproductive population and only a few cases have been reported in the literature, among which there is no case of labial fusion reported during pregnancy [2].

The etiology for the adhesions is unclear. Trauma to the superficial epithelium of the labia and subsequent healing leads to adhesions between the labia. Labial adhesion is thought to be caused by inflammation, lack of sexual activity and estrogen deficiency. It has been described and attributed to childhood genital lichen sclerosis, and chronic inflammation such as recurrent vulvovaginitis and urinary tract infections. This condition was also observed as a result of female circumcision [4].

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The patient's medical history revealed no genital trauma, lichensclerosis or female circumcision. Her menarche was at age 13 and her menstrual blood flow and voiding had been normal until two years before. However at that time she had a past history of genital herpes infection. Checking the literature we found that Omar *et al*. [5] reported labial fusion following genital herpes infection in young women. They concluded that labial fusion was a severe complication of primary genital herpes in young women.

The presentation of symptomatic labial fusion mostly includes pruritus of the vulva and soreness. Also urinary incontinence, voiding difficulties and urinary retention [6] are rarely reported symptoms of labial fusion. The current case presented with voiding difficulty and pseudoincontinance. Acharya *et al*. [7] and Ong *et al*. [8] also reported pseudoincontinance with labial fusion with similar symptoms as in the current case.

When the patient was asked why she waited so long to go to a gynecologist, she admitted that her quality of life was substantially diminished and that she did not visit a gynecologist until she experienced a menstrual delay despite the difficulty in urination. The reason behind it as claimed by the patient was the fear of losing her virginity during the probable surgery since an intact hymen or being a virgin at marriage is considered as a moral subject by some in Turkey.

The patient may benefit from topical estrogen therapy when the condition is caused by hypoestrogenism or to prevent recurrence after surgery. Steroids are of benefit when lichen sclerosus is present. Surgical lysis of the labial adhesions is required when topical application of estrogen cream fails or to relieve urinary symptoms in the subjects as in the current case. After surgery the patient reported significant improvement in her urinary symptoms and a return of normal urinary stream.

In refractory cases recurrence of labial adhesions could be effectively treated through excision and amniotic membrane grafting. Moreover, the raw areas could be covered by a rotational skin flap from the thigh.

In summary, a case of extensively fused labia with a pinhole opening and voiding difficulty in pregnancy and its management has been reported.

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