



Labial fusion: A rare cause of urinary retention in reproductive age woman and review of literature

Labial füzyon: Reprodüktif yaşta üriner retansiyonun nadir bir nedeni ve literatür araştırması

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ABSTRACT

Labial fusion usually affects prepubertal girls and postmenopausal women, it may rarely occurs in reproductive years in the absence of predisposing factors such as vulvar infections, dermatitis, trauma, female circumcision and lichen sclerosis. Should be considered in differential diagnosis in the differential diagnosis of urinary retention even if the patient doesn't have history of sexual intercourse.

Keywords: Labial fusion; reproductive age; urinary retention.

ÖZ

Labial füzyon genellikle prepubertal kız veya postmenapozal kadınları etkiler, çok nadiren vulvar enfeksiyon, dermatit, travma, kadın sünneti ve liken sklerosis gibi predispozan faktörlerin yokluğunda reprodüktif çağda görülebilir. Labial füzyon seksüel hikayesi olmayan hastalarda da üriner retansiyon nedeni olarak ayırıcı tanıda akılda tutulmalıdır.

Anahtar Kelimeler: Labial füzyon; reprodüktif dönem; üriner retansiyon.

Introduction

Labial fusion is a rare condition that is defined as the complete or partial fusion of the labia minora or majora.^[1] Labial fusion is encountered most often in prepubertal girls and postmenopausal women and is extremely rare in the reproductive population, with only a few cases reported in the literature. We report a 33 year old woman presenting with urinary retention due to labial fusion with no detectable predisposing factors.

Case presentation

A 33 year-old virgin women was admitted to our emergency department with voiding difficulty and pelvic pain. She stated that her symptoms had progressed over one week with anuria developing within the last 24 hours. She had no remarkable medical history for urinary symptoms or any history of perineal trauma, vulvovaginal infection, sexual intercourse or

abuse. She reported to have regular menstrual cycles since menarche. Her genital examination revealed total fusion of the labia minora in the midline with a dense fibrotic band obstructed the vagina, vestibule and urethral meatus. Bilateral labia majora appeared normal in shape and a pinhole opening was detected at the lower part of the vulva (Figure 1).

The uterus, cervix, and ovaries appeared normal on pelvic ultrasonography. Her hormone levels were within the normal range; with serum luteinizing hormone, follicular stimulating hormone and estradiol levels of 3.4 mU/mL, 4.2 mU/mL, and 174.1 pg/mL, respectively. The labial adhesion was separated by sharp dissection (Figure 2) under general anesthesia, and the separated edges of the labia minora were sutured with an absorbable suture material in the lithotomy position (Figure 3).

A 14 F Foley catheter was inserted into the bladder to prevent contamination of the wound with urine. The catheter was removed 48 hours

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Figure 1. Complete fusion of the labia minora with obliteration of the vaginal introitus and urethral meatus with a pinhole opening

following the operation and the patient was discharged from hospital with no medications prescribed. The pathological examination of the resected labial tissue revealed no abnormality. Satisfactory healing with no relapse was noted 3 months after surgery. The informed consent of the patient was obtained to publish this case.

Discussion

Here, we report a case of a virgin woman presenting with voiding difficulty who was consequently diagnosed with labial fusion upon physical examination. Adhesions of the labia are rare in reproductive-aged women with only a few cases described in the English literature. Six cases of labial fusion with unclear etiology were detected in the 'PubMed' and 'Google scholar' search using the index words 'labial adhesion' or 'labial fusion'. Table I shows labial fusion cases of reproductive aged women without discernable etiological factors. The reported causes of labial fusion in reproductive aged women include vulvar infections, poor hygiene, derma-



Figure 2. Labial separation with sharp dissection



Figure 3. Intraoperative view of vaginal introitus were exposed after dissection of the labia minor

Table 1. Cases of labial fusion without discernable etiological factors in reproductive aged women

Author	Age (years)	Complaint of admission	Treatment	Follow up
Goldstein et al. ^[5]	20	Inability to have intercourse	Surgical adhesiolysis	Not described
Kuo et al. ^[6]	30	Difficult coitus	Surgical adhesiolysis	No recurrence at 6 months
Topcuoglu et al. ^[8]	18	Urinary retention	Surgical adhesiolysis+ topical estrogen	No recurrence at 5 months
Kutlu et al. ^[7]	22	Urinary retention	Surgical adhesiolysis	Not described
Watanabe et al. ^[10]	35	Voiding difficulty	Surgical adhesiolysis	No recurrence at 6 months
Ozekinci et al. ^[9]	22	Difficult coitus	Surgical adhesiolysis+ topical estrogen	Not described
Present case	33	Urinary retention	Surgical adhesiolysis	No recurrence at 3 months

titis, trauma, female circumcision and lichen sclerosis.^[2,3] Additionally, Seehusen et al reported 9 cases of vaginal or labial adhesions requiring surgical corrections due to minor vaginal distortions occurring after healed intrapartum lacerations.^[4] Although being in the reproductive age group with normal sexual steroid production is thought to be protective against this condition, the present case was found to suffer from labial fusion without a demonstrable hypoestrogenic state or a predisposing cause.^[5,6] To our knowledge this is the fourth case of labial fusion reported from Turkey in the absence of any detectable predisposing factors. Similar to this case, Kutlu et al.^[7] reported a 21 year old woman with progressive voiding-difficulty and urinary retention due to labial fusion developing without an identifiable cause. The authors reported that the cause of labial fusion was likely to be associated with hypoestrogenism in the intrauterine and neonatal period. However, the acute onset of voiding symptoms and urinary retention in our case does not support this theory. Topcuoglu et al.^[8] reported an 18-year-old girl who presented with acute urinary retention. Labial fusion was diagnosed without any detectable etiological factors. Similar to the present case, the labial adhesions were lysed and an estrogen cream was applied locally. Also Ozekinci et al.^[9] reported a 22 year old case of labial fusion presenting with a failed attempt at vaginal coital activity. Similarly hypoestrogenemia was excluded with a history of regular menses, appearance of normal ovaries on ultrasound examination and normal hormone values. There was no history of sexual abuse or trauma. Labial adhesions were similarly treated by sharp dissection and daily topical estrogen ointment therapy was applied. Goldstein et al.^[5] reported the first case of agglutination of the labia minora in an adult with normal ovarian function. The 20 year old patient presented with inability to have sexual intercourse. Labial separation was performed by surgery. Finally Watanabe et al.^[10] reported a 35 year old woman suffering from voiding difficulty and inability to have sexual

intercourse. The cause of the labial adhesion was unclear in this case as well. Because of the presence of tight adhesions between the labia and no signs of estrogen deficiency, surgical adhesiolysis without the use of topical estrogen solved the problem. Urinary tract symptoms such as difficult voiding and urinary retention, as was encountered in the present case, and post voiding dribbling (incontinence) exists in 20-38% of such patients.^[11] Three of the aforementioned 6 cases presented with either urinary retention or voiding difficulty. Treatment strategies including surgical and medical modalities have been described. Topical estrogen is accepted as the initial therapy for superficial labial adhesions in prepubertal girls and postmenopausal women.^[12] In addition, manual separation of adhesions with care in keeping local hygiene have also been reported to resolve pediatric labial adhesions.^[13] In the present case our choice of treatment was surgery, due to the presence of a thick fibrous labial fusion and globe vesiculae. As the patient was in the reproductive age group with normal estradiol levels, no additional therapy was applied to prevent recurrence. Adequate levels of estrogen seems to be the only thing necessary for the spontaneous separation of agglutinated labia formed in childhood. Cases cited in this report were exceptions to the rule, probably because the initial inflammatory process caused such a high degree of scarring that estrogen alone could not solve the problem. As Table 1 shows, all six idiopathic labial adhesion cases also underwent surgical repair with successful outcomes.

In conclusion, labial fusion should be kept in mind in the differential diagnosis of urinary retention presenting in reproductive aged women without discernable etiological factors. Furthermore, it is important to perform a gynecological examination for the evaluation of voiding symptoms even if the patient does not have a history of sexual intercourse. Otherwise, the diagnosis of labial fusion may be delayed until the reproductive years.

Informed Consent: Written informed consent was obtained from patient who participated in this case.

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