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Case Report

# Extensive Labial Adhesion Causing Voiding Urinary Symptoms in a Postmenopausal Woman: A Case Report

Narjes Saberi, MD;
Farshad Gholipour, MD

Isfahan Kidney Transplantation Research Center, Department of Urology, AL-Zahra Research Institute, Isfahan University of Medical Sciences, Isfahan, Iran

**Correspondence:**
Farshad Gholipour, MD;
Department of Urology, No. 12, Mardavij St., Postal code: 81688-14193, Isfahan, Iran
**Tel:** +98 914 1286327
**Fax:** +98 31 36691510
**Email:** farshad.gholipoor@resident.mui.ac.ir
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## Abstract

Labial adhesion (LA) is a rare clinical entity in postmenopausal women. Estrogen deficiency and lack of sexual activity are probable contributing causes. Voiding dysfunction due to LA is even rarer in postmenopausal women, and only a few studies have previously reported such occurrence. A 62-year-old virgin postmenopausal woman presented to the Al-Zahra Hospital (Isfahan, Iran) with a 5-year history of voiding dysfunction and recurrent urinary tract infection. Despite multiple medical visits, no genital examination was ever performed by a medical practitioner, mainly due to the patient's refusal to be examined by a male physician. On physical examination, we observed extensive LA with only a small opening. Surgical separation of the labia was performed and subsequently, the urinary tract symptoms were completely resolved. Herein, we present a case of LA causing urinary problems in a virgin postmenopausal woman. The case underlines the importance of the genital examination of female patients with urinary tract symptoms.

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**Keywords** ● Female genitalia ● Urinary tract infection ● Physical examination ● Postmenopause ● Lower urinary tract symptoms

## What's Known

- Labial adhesion (LA) is a rare clinical entity in postmenopausal women. Estrogen deficiency and lack of sexual activity are probable contributing causes.
- Voiding dysfunction due to LA is even rarer in postmenopausal women and there are only a few case reports on such occurrence.

## What's New

- The case of LA causing urinary difficulties in a virgin postmenopausal woman is described; emphasizing the importance of postmenopausal health care.
- Physical examination of such patients by a female practitioner or at least in the presence of female personnel may overcome a patient's refusal for genital examination.

## Introduction

Labial adhesion (LA), also called labial fusion or labial agglutination, is defined as a complete or partial adherence of the labia minora.[1, 2] Its prevalence is reported to be about 1.8% and its peak incidence is between 13 and 23 months of age.[2, 3] LA is caused by congenital anomalies or acquired clinical conditions. Congenital LA may develop due to the congenital adrenal hyperplasia or exposure to exogenous androgen during pregnancy. It can also be associated with vaginal agenesis or ambiguous genitalia.[4] Acquired LA occurs most commonly during infancy. Vulvovaginitis and mechanical irritation have been suggested as causative factors. Low levels of estrogen may predispose the surface epithelium to trauma and inflammation. The lower prevalence of LA in women of reproductive age supports this theory.[4] This phenomenon is uncommon in postmenopausal women and rarely causes urinary symptoms. Unfortunately, there are no estimates of prevalence in this age group, and only a few cases of complete adherence in the postmenopausal population are described in the literature. Lack of sexual activity, low levels of serum estrogen, and senile vaginitis are among the etiologic factors of LA in postmenopausal women.[5] LA is an

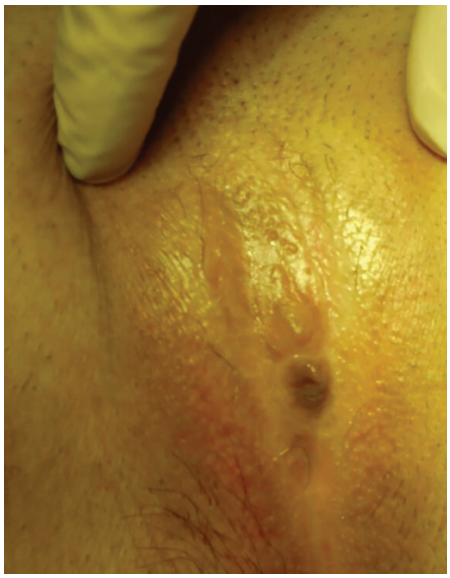

**Figure 1:** Extensive labial agglutination with only a pinhole opening at the anterior end.

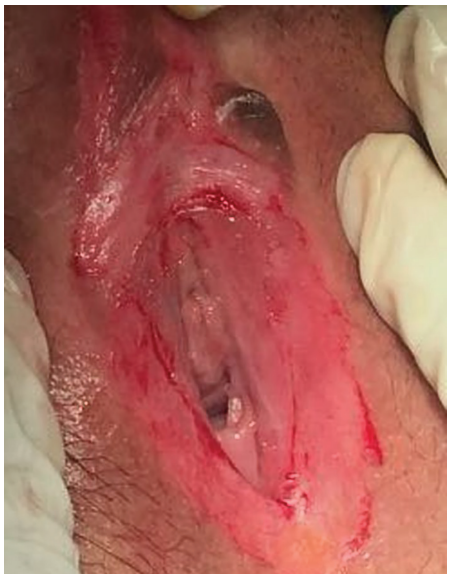

**Figure 2:** Surgical separation of the labia via blunt and sharp dissection.

extremely rare cause of voiding problems in this age group.[2, 6-8] Here, we present the case of a virgin postmenopausal woman with complete LA causing voiding difficulties and recurrent urinary tract infection (UTI).

## Case Presentation

A 62-year-old postmenopausal woman presented to the Al-Zahra Hospital (Isfahan, Iran) with a 5-year history of progressive voiding dysfunction and lower urinary tract symptoms including straining, sense of incomplete emptying, and recurrent cystitis. Her urinary stream was weak and she had to manually press on the lower abdomen to void. She was single and never had sexual intercourse. Urine analysis demonstrated 15-20 white blood cells, a few bacteria per high power fields, and the urine culture was negative. *E. coli* was the only microorganism found in some previous episodes of UTI. Ultrasonography showed increased bladder wall thickness and high post-voiding residual volume. The general physical examination was within the normal range. Pelvic examination revealed diffuse LA with only a small opening (figure 1). The LA extended from the posterior fourchette to the region of the clitoris covering the entire vaginal introitus, urethral meatus, and clitoris. No labial tenderness to palpation was present.

Local treatment with estrogen cream was not effective. Under general anesthesia, labial separation was performed along the line of adhesion (figure 2). No urethral stenosis was detected with urethrocystoscopy. The patient was asked to apply postoperative estrogen cream to the vulva. At a 3-month follow-up, urinary symptoms were completely resolved and her labium was fully open. Written informed consent was obtained from the patient for the publication of this case report and accompanying images.

## Discussion

LA may be asymptomatic or manifested by vaginal pruritus and, vulvodynia, but rarely by voiding symptoms.[1, 9] Spontaneous separation of the labia during puberty occurs in almost all cases of pediatric LA, though the local administration of estrogen cream can accelerate the process.[10] While manual separation of the labia is not recommended in pediatric patients, surgical intervention is required for symptomatic severe labial agglutination in adult women.[3] Postoperative use of estrogen or steroid cream is advised with the aim of preventing recurrence, although repeated surgery may be required in recurrent LA.[4] Anchoring sutures from the thigh to the clitoral area, to keep the labia separated during healing and a rotational skin flap, have been used in recurrent cases to prevent contraction and recurrent labial fusion.[11]

There are some reports about labial fusion causing micturition difficulties in postmenopausal women.[2, 6-8] Most of these cases have been related to urinary incontinence. This occurs due to partial labial fusion, particularly at the vaginal introitus, which provides a space for urine collection and subsequent leakage.[7, 8] However, in our case, a near-total obstruction due to severe LA prevented the occurrence of urinary incontinence. A previous study reported

the case of an elderly woman with a near-total fusion of the labia minora causing obstructive lower urinary tract symptoms with only a small opening at the posterior end.[7] In comparison, our patient had a severe labial agglutination that caused obstructive urinary symptoms and recurrent urinary infection for a long time. In addition, the site of opening in that study was different from our case. Our patient only had a small opening at the anterior end that caused difficult micturition. Moreover, the patient never underwent a genital examination simply because she refused to be examined by a male physician.

It is a rare phenomenon for a gynecologically healthy woman to be a virgin. We believe that the absence of sexual intercourse throughout our patient's life was a strong causative factor for labial agglutination. The key takeaway point from the present case report is that genital examination should certainly be performed on female patients with lower urinary tract symptoms.

## Conclusion

Examination of the genitalia should be viewed as part of the primary assessment in adult women with voiding dysfunction or recurrent UTI. Physical examination of such patients by a female practitioner or at least in the presence of female personnel may overcome a patient's refusal for genital examination.

**Conflict of Interest:** None declared.

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