

# Chronic Urinary Retention Due To Labial Fusion – Case Report

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## **Abstract**

Labial fusion, also known as vulvar fusion, conglutination of labia minor and adhesions of the labia minor is defined as a partial or complete adherence of the labia minor, a rare entity that mainly affects girls before puberty. We present a case report of a postmenopausal woman who presented with voiding difficulty, false urinary incontinence and a large history of recurrent low urinary tract infections who underwent surgical division of the adhesions with the immediate resolution of voiding symptoms. Labial fusion, usually affects young women and postmenopausal women, being very rare in the sexually active population. Present case emphasizes the importance of local physical examination for patients presenting persistent episodes of symptomatic urinary infection in combination with post-void symptoms.

**Keywords:** labial fusion, chronic urinary retention, urinary tract infection, elderly women.

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## Introduction

Labial fusion, also known as vulvar fusion, conglutination of labia minor and adhesions of the labia minor is defined as a partial or complete adherence of the labia minor, a rare entity that mainly affects girls before puberty. The first case was reported in 1936 by Nowlin and Adams under the title "Atresia of the Vulva in Children" and described 4 years later by Campbell who provided a comprehensive review of 9 cases using for the first time the "vulvar fusion" term. It affects up to 5% of the young population but it is uncommon in elderly<sup>1</sup>. It may be caused by chronic inflammation, or irritation of the vulvar skin due to poor local hygiene, seborrheic dermatitis or topical eczema<sup>2</sup>. Local trauma, lichen sclerosis and estrogen deficiency may lead to impairment of labia epithelium resulting in the progressive fusion of the labia.

Even though labial agglutination is rare and often manifests in nonspecific emptying symptoms it can be easily diagnosed in physical examination and successfully treated<sup>3</sup>. We present a case report of a postmenopausal woman who presented with voiding difficulty, false urinary incontinence and a large history of recurrent low urinary tract infections who underwent surgical division of the adhesions with the immediate resolution of voiding symptoms.

## Materials and Methods

Woman aged 71 years who presented very small urinary stream, voiding symptoms, and false urinary incontinence. Personal history reveals multiple episodes of urinary tract infections for which she received self medication without referring to a doctor. Her personal surgical record includes total hysterectomy for benign genital pathology followed by a Burch colposuspension after 3 years. She also receives treatment for type II diabetes and hypertension. She visited our outpatient department, were upon physical examination labial fusion was noted.



Fig 1. Preoperative aspect – complete fusion of labia minor covering the urethral meatus, clitoris and vaginal introitus.

Examination revealed complete and extended fusion of labia minor. Labial adhesion covered vaginal introitus, urethral meatus and clitoris and a pin hole opening in the middle (Fig 1).

As a result urine was unable to escape freely through the small introital opening and thus a retrograde filling of the vagina forming a cesspool which resulted in continuous leakage of urine post micturition. The patient was admitted for surgical treatment under spinal anesthesia. Preoperative findings included urinary tract infection (Klebsiellasp) with multiple resistances for which antibiotic therapy was initiated 24 hours before intervention. Also ultrasonography and urography were performed. Imagistic exploration revealed both kidneys and ureters without pathological modifications, bladder with post-void residue (Fig 2). Micturition cliché showed the reflux of urine in the vagina forming the cesspool with continuous leakage of urine without fully emptying.

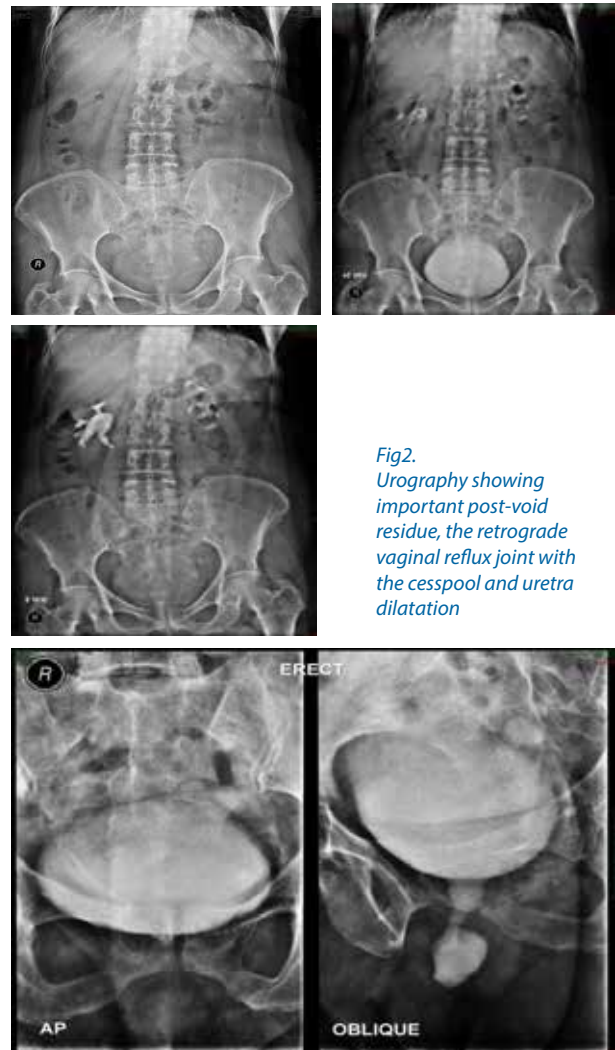


Fig2. Urography showing important post-void residue, the retrograde vaginal reflux joint with the cesspool and uretra dilatation



Fig3.  
Intraoperative  
aspects

Under spinal anesthesia, in lithotomy position, surgical sharp dissection of the labia minor was performed, cesspool discharge, urethral catheterization using Foley 16 CH catheter followed by topically applied antibiotic. Also there was a vaginal pack inserted into the vagina in attempt to keep the raw area of the labia separated which was removed simultaneously with the bladder catheter (Fig.3). There were no modifications on the urethral meatus and urethral dilatation was unnecessary. The Foley catheter was removed after 2 days. Estrogen cream was topically applied daily to prevent postoperative relapse (Fig.4).

After removing the catheter the women was perfectly continent being able to empty the bladder without post micturition residue. The irritative symptoms were no longer present at discharge. Due to the urinary tract infection highlighted before surgical treatment the antibiotic therapy was prolonged for 5 more days.

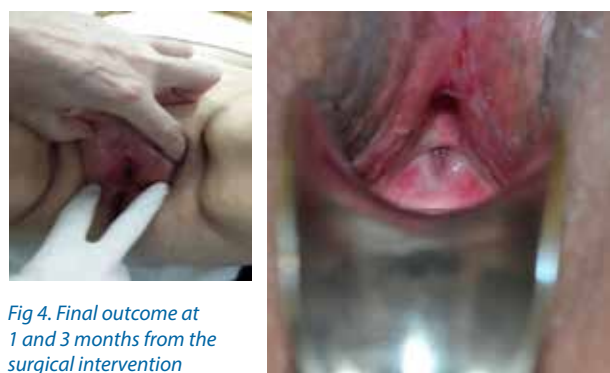


Fig 4. Final outcome at  
1 and 3 months from the  
surgical intervention

## Discussions

Labial adhesion is uncommon in elderly population but is affecting 0,6 up to 5% of children with a maximum prevalence in the first two years of life<sup>4, 5</sup>. Most children are asymptomatic<sup>6</sup>.

Several authors have reported unspecific manifestations including in this group dysuria, voiding difficulties, false urinary incontinence. Mupala and Meskhi reported a "popping sensation" in a 72 years old woman when sneezing<sup>7</sup>. The clinical course of the case was similar with the one described. The effect of menopause on the vulva and the vagina causing thinning of the mucosa and vulvar atrophy. Other normal changes include a loss of the fat in labia major, thinner labia minor and a decrease of vaginal length<sup>5</sup>.

The incriminated risk factors for developing such pathology includes hypoestrogenism, local trauma, decreased sexual activity, poor local hygiene, vagina inflammation and/or irritation. A particular case is represented by the presence of Lichen Sclerosus.

Lichen Sclerosus preferentially affects the anogenital region but also any other cutaneous site may also be affected. In literature it varies from 1 to 30 in elderly women, 1 in 59 women in general gynecology practice<sup>8</sup>. A high level of suspicion is required in acute urinary retention due to labial fusion especially in postmenopausal population.

For partial, incomplete and superficial adhesions the first choice of treatment is represented by topical estrogen cream therapy joint with better personal hygiene which may reduce the level of local irritation.

Surgical treatment is especially indicated in those cases where there are complete adhesions, a long history of labial fusion that underwent local treatment and cases complicated with acute urine retention that occurs in elderly women.

Combined treatment – surgical and topically applied estrogens – determine an overall outcome in the recurrence of the labial fusion. Also a discussion of improving personal hygiene is necessary, especially in elderly women that have a decreased sexual activity. In order to avoid recurrence, additional procedures, such as hydrocolloid dressing or rotational skin flap grafting from the thigh may be undertaken, especially in refractory cases<sup>9</sup>.

## Conclusions

Labial fusion, usually affects young women and postmenopausal women, being very rare in the sex-

ually active population . Present case emphasizes the importance of local physical examination for patients presenting persistent episodes of symptomatic urinary infection in combination with post-void symptoms. Also, this entity should be considered in the outpatient consultations if there are involved postmenopausal women with urinary infections with multiple drug resistant germs. Although it is a rare event, should be considered in the differential diagnosis of the patients presenting for sexual dysfunction.

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