Case Report

Complete Labial Fusion Causing Pseudo-Urinary Incontinence: A Long-Term Sequelae of Genitourinary Syndrome

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Abstract

Genitourinary syndrome (GSM) of menopause is due to hypoestrogenism affecting the vagina and lower urinary tract. Atrophic changes manifesting as complete labial fusion (CLF) are rare. They may present with urinary incontinence and cannot be classified as stress or urge urinary incontinence. We report a case of 68-year-old postmenopausal women who presented with symptoms of urinary incontinence secondary to CLF. Surgical correction and restoration of the labial anatomy with topical estrogen lead to successful management.

Keywords: Complete labial fusion, genitourinary syndrome, postmenopausal women

Introduction

Atrophic symptoms of the genitourinary syndrome (GSM) of menopause are a consequence of hypoestrogenism, affecting the vagina and lower urinary tract. They are progressive and frequently require treatment in postmenopausal women. Delay in treatment results in common presentations such as recurrent urinary tract infection, urgency, and sexual dysfunction. Labial adhesions, pseudo-incontinence, and urethra retraction in the anterior vaginal wall are uncommon presentations of GSM of menopause. Secondary complete labial fusion (CLF) is a severe form of GSM. Reported incidence of acquired labial adhesion in prepubertal girls is between 0.6% and 5%. In the literature, there are only case series and case reports of labial adhesion in postmenopausal women. Mikos et al. have shared their experience with a retrospective review of seven cases of surgical correction of CLF in postmenopausal women presenting with lower urinary tract symptoms. Another series of six cases by Singh and Han reported the presentation and management of CLF in these group of women. We present a case of a 68-year-old postmenopausal woman with pseudo-urinary incontinence. The purpose of reporting this case is to elaborate on the importance of early diagnosis and treatment of GSM and to prevent long-term sequelae.

Case Report

A 68-year-old postmenopausal woman presented with symptoms of urinary incontinence. She attained menopause at the age of 50 and is not sexually active for the past 15 years. She had four uneventful vaginal deliveries. Her first visit to a gynecologist was in 2012 for itching, burning of the vulvovaginal area, and repeated urinary tract infections. Local examination of the genitalia showed a fissure at the fourchette, decreased vaginal rugae, and increased friability with petechiae. The vaginal pH was 7, and the pap test reported an atrophic smear. Transvaginal ultrasound was consistent with postmenopausal status. She was started on daily conjugated equine estrogen 0.625 mg cream for 15 days, followed by twice weekly for 6 months. The fissure was not healing at day 15, and biopsy from the fissure site showed nonspecific inflammation. She was to continue local estrogen therapy. Two years later, she returned with complete fusion of labia minora from clitoris to the posterior fourchette with a tiny opening at the anterior one-third of the introitus through which she was voiding and had stopped estrogen therapy.

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This time, the labia were manually separated under local lignocaine cream. She was lost for follow-up and returned 3 years later with dribbling of urine. She was not on any medication. A routine urogynecological examination was performed with history and detailed examination. Local examination of the genitalia had signs of atrophy with a CLF of the genitalia [Figure 1]. Introitus was not identified due to labial fusion. The cough test was negative, and post-void residual volume was 40 ml on abdominal ultrasound.

Surgical correction
Under short general anesthesia, patient is positioned in lithotomy. Surgical separation and restoration of labial anatomy were done. A midline vertical incision is given along the midline raphe, which opened up a normal urethra, vaginal introitus, vagina, cervix, and uterus. The vaginal pH was 7. Labial skin edges were freshened and sutured to the vaginal epithelium using 2-0 vicryl [Figure 2]. Vulvar biopsy reported as patchy inflammation. Surgical correction of CLF was uneventful.

Postoperative
Immediate postoperative care was with a third-generation cephalosporin antibiotic and analgesics. Vaginal pack and the indwelling catheter were removed after 24 h. She was started on daily vaginal conjugated equine estrogen of 0.625 mg cream for 15 days and then twice weekly for 6 months. The pseudo-incontinence has resolved entirely. She has been local estrogen therapy 0.5 mg estriol once weekly for 1 year. There was no agglutination of labia with complete resolution of urinary symptoms after a follow-up of 3 years. Vaginal pH is 5 at 3-year follow-up [Figure 3].

Discussion
Pseudo-urinary incontinence occurs secondary to complete fusion of labia minora with a small pinhole through which urine can escape, and the vagina fills with urine causing urocolpos and dribbling. This condition cannot be classified as stress or urge urinary incontinence."[6-8] Diagnosis is made on examination of the introitus. Some authors believe that labial fusion/adhesions play a role in urinary incontinence’s etiopathogenesis in these types of cases.[5] Surgical correction is the treatment for CLF, and urinary symptoms resolved completely following correction of labial fusion. The challenge here is to make women adhere to local therapy and follow-up. We have a follow-up of 3 years, in which she uses a low dose of local estrogen twice weekly since surgery. Local estrogen therapy is stopped after 3 years, and she is on follow-up with symptoms and vaginal pH. To prevent recurrence, and owing to her low compliance, she has been counseled about the atrophic changes due to aging and...
the use of long-term estrogens. A telephonic follow-up every 3 months to enquire about her symptoms is made with a reminder call to visit at 6 months.

Safety of long-term use of vaginal estrogen has been studied by two large, prospective observational cohort studies of postmenopausal women. The Women’s Health Initiative study has a follow-up of 2 years in 1500 women who used vaginal estrogen. The Nurses’ Health Study has a follow-up for a mean duration of 3 years in 900 women using vaginal estrogen. Neither of these studies showed vaginal estrogen associated with an elevated risk for endometrial, breast, colorectal cancer, coronary heart disease, stroke, or venous thromboembolism.\[^{9,10}\]

**Clinical relevance**

GSM is often under-diagnosed, due to sexual embarrassment, or is considered a liability of natural aging. Relevant history and straightforward examination of genitalia in women reporting with symptoms of GSM will help in early diagnosis and treatment. The challenge following diagnosis is the compliance for long-term local therapy. GSM, being a progressive condition, affects the quality of life in many ways; one of the severe presentations is pseudo-incontinence due to CLF.

**Conclusions**

We present a case of CLF with pseudo-incontinence with successful surgical correction. The prevalence of labial fusion is unknown, and it may be under-reported. Clinicians need to be proactive in early diagnosis, counseling, and management follow-up of GSM to prevent sequelae.

**Consent**

We obtained informed consent from the patient for publishing this report.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understand that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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**Conflicts of interest**

There are no conflicts of interest.

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