CASE REPORT

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Complete Labial Fusion in Postmenopause

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ABSTRACT Labial adhesion is defined as flimsy or dense fusion of labia minora in the middle which may be congenital or acquired. These adhesions are usually seen in prepubertal girls but rarely in postmenopausal women. Management options include topical estrogen with or without steroids or surgery in persistent circumstances. The case reported here was an 83-year-old postmenopausal woman who was presented with urinary retention and recurrent urinary tract infections. On examination, she had complete labial fusion leaving only a pinhole opening for voiding. A surgical approach was performed via a midline incision and complete excision of bilateral labia minora. Her urinary complaints were dissolved. Surgical management options for postmenopausal complete labial fusion cases will be discussed.

Keywords: Complete labial fusion; incomplete voiding; recurrent urinary tract infection

Labial adhesion is defined as complete or partial fusion of labia minora and may be congenital or acquired.[1-3] In contrast to the pediatric population in which the fusion usually involves labia minora, adhesions may also involve labia majora in postmenopausal women.[4] Possible etiologic factors in congenital cases are intrauterine exposure to exogenous androgens and congenital adrenal hyperplasia. Most cases are under the age of 6 in pediatric population with an incidence of 0.6-5%.[2,5] In acquired cases, conditions with estrogen deficiency, injuries, Behçet's disease, Steven Johnson syndrome, graft versus host disease may be underlying causes. Chronic inflammation, seborrheic dermatitis, eczema, recurrent urinary tract infections, lichen planus, lichen sclerosis, the absence of sexual activity (in postmenopausal cases) can be counted as precipitating factors.[1,4] Also, postmenopausal women with orthopedic hip and/or neurologic lower extremity problems are generally at increased risk due to reduced or absent sexual activity and poor perineal hygiene.[6]

CASE REPORT

The patient presented here was an 83-year-old postmenopausal woman who had presented with recurrent urinary tract infection related complaints and almost complete closure of the vaginal introitus due to bilateral labia minora fusion. There was only a small opening enough to let partial voiding. The patient had had her last menstrual period 38 years ago and reported being as sexually inactive for more than 20 years. Her past surgical history was significant for a cesarean delivery and an anterior vaginalrepair. The patient was prescribed topical estrogen and applied it 3 weeks with no benefit at all. On her examination, the vulva was atrophic with complete labial fusion beginning from the posterior fourchette to the clitoris having a pinhole opening. Ultrasound of the abdomen and kidneys was unremarkable with a postvoid residual volume (PVR) of 320 cc. Pelvic and abdominal magnetic resonance imaging was within normal limits.

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After informed consent was obtained, the patient was taken to the operating room. Under general anesthesia the patient was prepped and draped in the lithotomy position.The small hole in the fused labia minora was elevated with a hemostatic clamp (pean) and a midline vertical incision was made upward from the opening up to the external urethral orifice and downwardup to the point when the vaginal introitus was clearly visible (Figure 1, Figure 2). Vaginal epithelium was atrophic and inflamed secondary to urinary retention. The bladder was drained with a 12F catheter. Labia minora and the proximal adhesion next to it was excised completely. Mucosa and submucosa were approximated in seperate layers with 3-0 vicryl sutures. A topical antibiotic (nitrofurazon cream) was applied to the mucocutaneous border (Figure 3). The patient urinated without difficulty and recovered well post-operatively. She was discharged from the hospital two days after the surgery and was prescribed a topical antibiotic (nitrofurazon cream) twice a day for the first two weeks and then was switched to topical estrogen for three weeks.

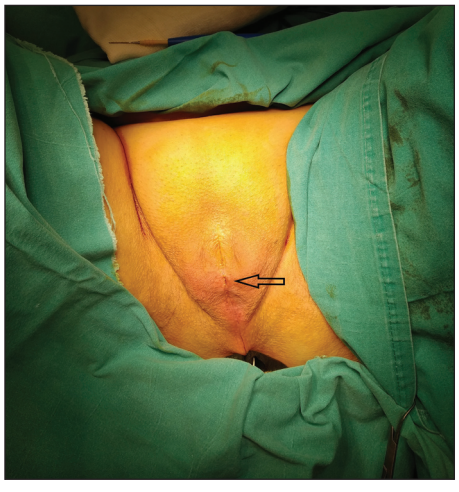

FIGURE 1: Complete labial adhesion and small vaginal opening (black arrow).

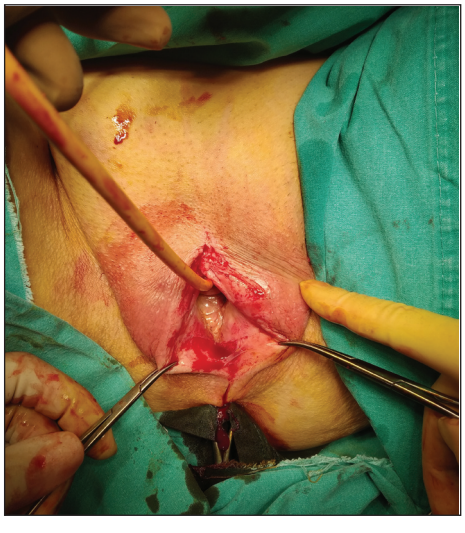

FIGURE 2: External urethral orifice and vaginal introitus after labial excision.

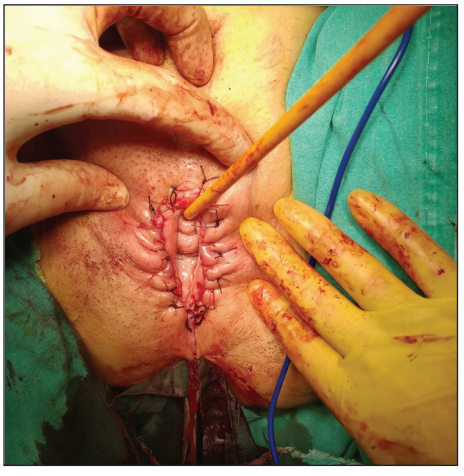

FIGURE 3: Vulvar appearance at the end of the operation.

At a routine postoperative evaluation 4 months after surgery, she reported complete resolution of her urinary symptoms. The post-void bladder scan revealed a normal PVR.

DISCUSSION

Labial adhesions may be asymptomatic or present with urinary and/or vulvar complaints.This condition is generally observed in postmenopausal women and in prepubertal girls.[5,7] Postmenopausal women with labial adhesion frequently present with difficulty in voiding, urinary retention, urinary incontinence and vulvar complaints preventing sexual activity.[2,4,6,8,9] When urine flow is obstructed, it leads to urinary retension and recurrent urinary tract infections.[7] In these cases, renal injury, pelvic inflammatory disease and related rare complications such as peritonitis and pyosalpinx have been reported.[8,10] Adhesions may be caused by a low-estrogen environment which could trigger fibrosis by decreased inhibition on fibroblasts. However, labial fusion may also develop without known risk factors and other etiologies.[11] Fusion of labia can impede the diagnosis of malign/ premalig-

nant lesions by impairing thorough gynecologic examination and by masking vaginal bleeding and palpable masses.[3] Renal function tests and imaging of the genitourinary system may be warranted for unseen problems, especially in cases with obstructive symptoms.[12,13]

In general, first-line management of labial adhesions in the hypoestrogenic patients is topical estrogen therapy. In pediatric population, topical steroid such as betamethasone may be an alternative which may be more effective with less recurrence and minimal short-term adverse effects and faster resolution.[14] In postmenopausal women, there is not enough data for betamethasone in labial fusion treatment.In cases with lichen sclerosis, if the inflammation is minimized pre and postoperatively, then surgery can be the definitive treatment.

Recurrence of adhesions occurs in 14-20% of patients who have undergone surgical or manual separation; hence, it is important to emphasize the topical estrogen application and frequent digital separation of the vulva, especially in patients who are not sexually active.[4,15] In our case, topical estrogen treatment was not successful and because of the recurrent urinary infections and severe labial fusion, surgical therapy was preferred. Postoperative topical antibacterial and estrogen were used for 2-3 weeks to prevent infection and recurrence.

In conclusion, labial adhesions are generally seen in prepubertal girls and rarely in postmenopausal women. Management options include application of topical estrogen with or without steroids or surgery in unresponsive cases. Postoperative topical antibiotics and estrogen creams are generally used to minimize the risk of infection and recurrence.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

This study is entirely author's own work and no other author contribution.

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