

A case of labial fusion and urinary pseudo-incontinence in an elderly woman. A surgical treatment and a review

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Abstract. – Labial fusion is defined as either partial or complete adherence of the labia minora (1), and also called vulvar fusion, adhesions of the labia minor or conglutination of the labia minora and sinechia of the vulva. The complete and severe labial fusion is a rare pathology with a small number of cases reported in the literature in adults.

We present a case report of a postmenopausal woman who presented with voiding difficulty and incontinence and was treated by surgical division of the adhesions and immediate resolution of the urinary incontinence confirmed by multichannel urodynamic test postoperatively.

Key Words:

Labial fusion, Urinary incontinence, Menopause.

Case Report

A 71-year-old woman with 3 vaginal deliveries was referred with a 1-year history of symptoms of voiding difficulty and urinary incontinence. Her past history included a vaginal hysterectomy and repair of cystourethrocele by means of Kelly-Kennedy technique in the 1995.

On examination of the vulva revealed that both the labia minora were extensively fused. The labial adhesions covering the vaginal introitus, urethral meatus and clitoris. The rest of the vulva appeared atrophic (Figure 1); a pinhole opening at the midline.

The woman was unable to have voiding stimulus. Urine was unable to escape freely through the small introital opening and there was retrograde filling of the vagina, which resulted in continual leakage of urine postmicturition.

Urography, performed before the surgical time, revealed normal kidneys, ureteres, bladder and urethra morphology and reflux of urine in the vagina (Figure 2).

Preoperatively the woman was treated by oestriol 0.0125% cream daily for two weeks.

Under a general anesthesia the labia were separated by sharp dissection along the line of labial adhesion to restore normal anatomy (Figure 3).

A vesical 14 F catheter and vaginal pack were inserted in attempt to keep the raw area of the labia separated. The vaginal pack and vesical catheter was removed at 2nd day postoperatively.

Oestrogen cream (oestriol 0.0125%) was topically applied daily postoperatively to ward off a relapse.

Removed the vesical catheter the woman was able to bladder voiding and to have urinary continence. Multichannel urodynamic test postoperatively was performed. The multichannel urodynamic test have shown: the bladder give a Contractions not inhibited (C.N.I.) 23 cm of H₂O; voiding normal pressures; moderate residue (25 ml); closing normal pressure; normal functional lenght; expelled volume: 314 ml; max flux: 18,5 ml/s; middle flux: 8,5 ml/s; voiding time: 39 s; flux time: 37 s; attainment time of max flux: 7 s; normal sphinteric function.

Discussion

Labial fusion is typically described in children, especially in development countries, with highest incidence in the first 2 years of life^{2,3}. Labial fusion is a benign genital disorders in girls: it may be either congenital or acquired,



Figure 1. Preoperative view.

sometimes due to poor hygiene. Congenital labial fusion may be associated with anatomical abnormalities in the newborn including ambiguous genitalia and congenital absence of the vagina or occur as a result of true hermaphroditism, pseudohermaphroditism, congenital adrenal hyperplasia or intrauterine exposure to exogenous androgens⁴. Acquired labial fusion can occur also for trauma to the upper squamous layer of the labial epithelium with formation of scar tissue between the 2 opposed labia as healing occurs⁵.

Acquired labial fusion can occur in childhood in prepubescent girls and the commonest age of



Figure 2. The RX urography shown urine reflux in the vagina.



Figure 3. Intraoperative views.

presentation is 2.5 years, with more than 90% occurring under the age of 6 years⁶. Parental panic about this “absent vagina” contrasts with its simple, rapid, radical treatment³. Is rarely reported in adolescents and women of reproductive age and appears to be associated with a combination of local inflammation and the estrogens deficiency seen in the premenarchal age group⁴⁻⁷. One theory for labial fusion is low prepubertal estrogens levels. In fact, spontaneous separation of labial adhesions occurs at puberty with the production of endogenous estrogens¹. Estrogen’s action in regard to collagen may influence recurrent adhesions and adhesions that form after manual disruption or surgical separation. Estrogens may have a role in vaginal healing in genital surgery.

Topical estrogens remain the mainstay of therapy⁸. Estrogens treatment – twice daily – is a long procedure (3 or 4 months)^{3,8}.

Lower urinary tract obstruction in women is an uncommon condition resulting from multiple either organic or functional disorders. Partial and incomplete or complete vulvar fusion usually occurs in significant repercussion on urination dynamics⁹.

The etiology for the adhesions is unclear, although vulvovaginitis and mechanical irritation have been implicated as causative factors^{6,12}. Chronic inflammation is thought to produce denudation of the thin surface epithelium, which in close approximation allows the labia to adhere to each other and result in obstruction of introitus¹³. The hypo estrogenic state may predispose the epithelium to trauma and inflammation. The reproductive age, with a normal sexual steroids production, may be protective against this condition^{14,15}.

A new surgical technique to treat refractory labial fusion in the elderly was presented in



Figure 4. Post-operative after 6 months.

1989. This surgical technique is so described in detail: (1) Labial separation; (2) The subsequent raw area is covered by a rotational skin flap from the thigh. The flap is deroted of epithelium proximally and tunneled subcutaneously. The distal portion emerged to cover the raw clitoral area and this successfully prevented contraction and scarring. This new technique is suitable in elderly patients with cases of labial adhesion that are refractory to all other treatment modalities¹⁶.

We have reviewed the literature on labial fusion and when identified in the postmenopausal woman, these adhesions may be treated with a combination of surgery, topical hormones (estrogens and/or steroids) and manual separation of the labia during the reparative period with resolution of coexisting urinary symptoms and dysfunction. Management of the incontinence and agglutination and response to treatment were reviewed. Medication usage was examined.

In this case report the surgical treatment have resolved the urinary symptoms and dysfunction as to prove by multichannel urodynamic test (Figure 4).

The quick resolution of the urinary incontinence after the surgical lysis of the labial fusion should to define this condition a *urinary pseudo-incontinence* and non-a urinary incontinence so as habitually is defined in the reviewed literature.

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