



Functional medicine

## Potential effects of postmenopausal labial agglutination on the urinary system

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### ARTICLE INFO

#### Keywords:

Labial agglutination/labial adhesions labial agglutination lysis urinary incontinence pseudo-incontinence lichen sclerosus prepubertal postmenopausal

### ABSTRACT

Labial agglutination (LA) can affect prepubertal or postmenopausal women. LA commonly affects prepubertal girls, but the rate at which LA affects postmenopausal women is unknown, with only a few documented case reports. Symptoms of LA include vulvovaginal pain, dysuria, dyspareunia, and urinary incontinence/urinary symptoms. First-line treatment includes low dose estrogen cream and high dose topical steroid cream. If the creams fail, surgical lysis can be performed. The commonality between these age groups is chronic inflammation and low estrogen. It is important to keep in mind, especially in postmenopausal women, that LA can lead to urinary symptom side effects.

### Introduction

Labial agglutination (LA) can affect prepubertal or postmenopausal women - commonly affecting prepubertal girls at a prevalence of 1.8–3.3%.<sup>1</sup> The rate at which LA affects postmenopausal women is unknown, with only a few documented case reports. The most common etiologies for LA are vaginal atrophy and vulvar lichen sclerosus (LS). Chronic irritation can lead to vulvovaginal pain, dysuria, dyspareunia, and urinary incontinence or urinary retention if obstruction occurs. First-line treatment includes low dose estrogen cream and high dose topical steroid cream. If the creams fail, surgical lysis can be performed.<sup>2</sup> The commonality between these age groups is chronic inflammation and low estrogen. A decreased estrogen level predisposes the epithelium to trauma and inflammation secondary to alkalinization and thinning of the vulvar and vaginal mucosa.<sup>2</sup>

### Case report

KD is a 58-year-old Caucasian woman who presented to the office complaining of overactive bladder (OAB) and symptoms related to her

LA - vaginal dryness, pruritus, vaginal pain, and dyspareunia. She expressed that her symptoms have been occurring for quite some time and were very bothersome despite using estrogen vaginal cream twice daily for four weeks. On physical exam, the patient was tender to touch with very thin tissue and severe labial minora agglutination (LMA) with her clitoris completely covered. Vaginal atrophy and bilateral LS down to the perineum was also appreciated. In addition to continuing the estrogen cream once daily, Clobetasol 0.05% cream daily was added to her regimen as well as Myrbetriq.

Four weeks later, KD was impressed with Myrbetriq resolving her OAB symptoms but was still bothered with the LA symptoms with minimal improvement - supporting that her OAB symptoms were unrelated to her LA. Failed conservative treatment led to surgical separation of the clitoral hood from LA without any complications. The LA was separated manually using both gentle traction and electrocautery - this technique was chosen due to the LA being a minor case confined to the clitoris only. A 2-0 Vicryl was used to reapproximate the tissues of the clitoral hood once separated from the labia minora. Premarin 0.5 gm vaginal cream twice a day, Percocet and Anaprox were prescribed post-op. One week post-op, the patient complained of brownish discharge,

*Abbreviations:* LA, labial agglutination; LMA, labial minora agglutination; LS, lichen sclerosus; Post-op, post-operation; SCC, squamous cell carcinoma; UTI, urinary tract infection.

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<https://doi.org/10.1016/j.eucr.2021.101565>

Received 23 November 2020; Received in revised form 4 January 2021; Accepted 5 January 2021

Available online 6 January 2021

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irritation, and swelling of the labia majora appropriate for one-week post-op. To help with the irritation, Triamcinolone acetonide 0.1% twice a day for seven days was prescribed.

At her second post-op visit, the patient's labia had started to slightly adhere again and continued to do such until 12 weeks post-op. The patient admitted to noncompliance with her estrogen cream. Labial adhesions were lysed six times in the office with lidocaine (4, 5, 6, 10, 11, and 12 weeks post-op). At each visit, the patient was instructed on the importance of applying her estrogen cream daily to prevent recurrence.

At 5 weeks post-op, the patient's LA and pain improved by 80% and by 12 weeks post-op her LA was improved by 95%. A more aggressive surgical approach was avoided due to the size of the LA being confined to the clitoris and the desired outcome was achieved post-op when the estrogen cream was consistently used as prescribed. By her 4 month post-op visit the patient noted a great improvement of her symptoms that originally brought her in - vaginal pruritus, vaginal pain, and dyspareunia. Her only remaining complaint at follow-up visits was vaginal dryness secondary to menopause. She was encouraged to continue using the estrogen cream and to try vaginal lubricants for her vaginal dryness. A year post-op and KD's self-reported that her quality of life has been greatly improved and was doing well on Myrbetriq, estrogen cream and vaginal lubricants.

## Discussion

The most common etiologies for LA are vaginal atrophy and vulvar LS. Chronic irritation can lead to vulvovaginal pain, dysuria, dyspareunia, and urinary incontinence or urinary retention if obstruction occurs. First-line treatment includes low-dose estrogen cream and high-dose topical steroid cream. If first-line treatment does not lyse the LA or the patient presents with acute urinary retention, surgical lysis can be performed.<sup>2</sup> Comparable to our patient KD, Pulvino et al.'s paper discussed how the combination of manual separation, estrogen, and steroid creams all contributed to the success of postoperative management of this condition.<sup>3</sup>

Urinary incontinence prevalence in women is about 30% and increases with age. One etiology of urine incontinence that is not frequently reported is LA. LA symptoms include recurrent UTIs, change in flow of urine, urinary incontinence, pelvic pressure, dyspareunia, urinary urgency, frequency, dysuria, enuresis, and urinary retention. Based on the Pulvino et al. study, LA can play a significant role in urinary incontinence and should be on the differential when treating an incontinent patient and highlights why physical exams are necessary.<sup>3</sup>

When treating postmenopausal women, LA should be on the

differential as it can go misdiagnosed as UTIs or emptying dysfunctions, such as pseudo-incontinence.<sup>4</sup> Complete labial fusion can lead to pseudo-incontinence - continuous dribbling of urine that is not classified either as stress or urge urinary incontinence. Methods of preventing the recurrence of severe cases of agglutination include the following: application of silicon film or hydrocolloid dressings or rotational skin flap grafting from the thigh.<sup>4</sup> Mikos et al.<sup>1</sup> recommends a 'U' shaped excision of the agglutinated labia minora to prevent re-agglutination and removed tissue to be examined to rule out malignancy since vulvar LS increases the risk of SCC.<sup>5</sup>

Although KD's case was not severe enough to cause urinary symptoms secondary to LA, it is important to mention as urinary incontinence secondary to LA can go undiagnosed.

## Conclusion

The prevalence of LA in postmenopausal women remains unknown, with very few documented cases. Is LA rare in postmenopausal women, or is the condition underreported? What seems to be the culprit in both prepubertal and postmenopausal is a lack of estrogen. These vulvar and vaginal mucosa changes suggest that estrogen has a protective effect on agglutination<sup>3</sup> and supports the first-line treatment of estrogen cream. With high urinary incontinence prevalence (30%), one must keep in mind that LA, especially complete LA, can cause urinary symptoms.

## Declaration of competing interest

Dr. Williams is a surgical consultant for Coloplast Urology.

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