LABIAL ADHESIONS IN REPRODUCTIVE-AGE WOMEN: CLINICAL CASE SERIES

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BACKGROUND

Labial adhesion—also known as labial fusion, labial agglutination, or synechia vulvae—is a rare condition in women of reproductive age. We report two cases of reproductive-aged women with labial adhesion who were successfully managed surgically.

CASE PRESENTATION: The first case involves a 29-year-old para one who presented with difficulty engaging in penetrative sexual intercourse following childbirth at a health centre two years earlier. Physical examination of the genitalia revealed fusion of the labia, with the exception of a small distal opening.

The second case concerns a 20-year-old nulligravid woman who was sexually inactive and presented with a three-year history of painful menstrual flow. Examination revealed fusion of the labia with a small proximal opening.

CONCLUSION: Labial adhesion is rare in the reproductive age group. It should be considered in the differential diagnosis of women presenting with menstrual irregularities or sexual dysfunction.

KEYWORDS: Labial adhesion, agglutination, reproductive-age women, surgical adhesiolysis

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INTRODUCTION

Labial adhesion is a rare condition defined as the complete or partial fusion of the labia minora or majora[1]. The membrane typically seals the vaginal opening, leaving only a small anterior gap through which urine is passed[2]. Labial adhesion is most commonly seen in prepubertal girls and postmenopausal women and is extremely rare in women of reproductive age, with only a few reported cases in the literature[1,3]. It is hypothesized that the relative hypoestrogenic states in prepubertal and postmenopausal periods predispose these populations to labial adhesions[4]. In the prepubertal group, the condition often resolves spontaneously[5]. In contrast, labial adhesion in reproductive-aged women is considered extremely rare due to the typically high estrogen levels. In this age group, the etiology remains unclear[5]. Known secondary causes include female circumcision, lichen sclerosus, herpes simplex virus infection, diabetes mellitus, pemphigoid, and caustic vaginitis[6]. Cases without evidence of hypoestrogenism or chronic skin conditions are particularly uncommon. Postpartum labial adhesions are rarely described in the literature[4]. Vaginal lacerations following childbirth, along with the transient hypoestrogenic state of the postpartum period, are proposed risk factors[4,5].

The standard treatment for adult labial adhesion is surgical adhesiolysis. In contrast, pediatric cases often respond well to topical estrogen therapy and improved hygiene[5]. In adults, however, topical estrogen is generally less effective, and surgery is frequently required[1,2,3,6]. Current literature does not support topical estrogen as a first-line treatment. Instead, surgical dissection under local or regional anesthesia is recommended, especially in postpartum cases[4].

We report two cases of labial adhesions in reproductive-aged women managed surgically. Although rare in this age group, such cases can significantly impair quality of life and often require surgical intervention, unlike similar conditions in younger or older women.

Case 1

A 29-year-old para one was referred from a private health facility to our hospital with complaints of difficulty engaging in sexual intercourse. She had delivered vaginally at a health centre two years earlier, during which she sustained genital trauma that was sutured. She had been using depot medroxyprogesterone acetate injectable contraception. Her menstrual cycle was regular, with a three-day flow, and she had no urinary complaints.

On physical examination, the labia minora were fused except anteriorly, where there was a small opening measuring 0.5 cm in diameter. The labia majora appeared normal, with no visible skin lesions or scarring. Pelvic ultrasound, urinalysis, and complete blood count results were all within normal limits.

Following informed written consent, surgical adhesiolysis was performed under spinal anesthesia. The labial edges were sutured using Vicryl 3-0, and the patient was advised to apply petroleum jelly to the area for three weeks. At follow-up, her vagina, cervix, and clitoris appeared normal, and the labia had healed completely without recurrence of adhesion.

Figure 1. Labial adhesions before surgery. (thin arrow indicating the opening of the labial adhesion, big arrow indicating vaginal mucosa but there was no communication at the site with the vaginal canal)

Figure 2. After surgical correction of labial adhesions

Case 2

A 20-year-old nulligravida was referred from a local health center to our hospital with a complaint of painful menstruation lasting for three years. Her menses occurred monthly but flowed for two weeks. She reported no difficulty with urination, had no history of genital trauma, and was not sexually active.

On physical examination, the labia majora and clitoris appeared normal. However, there was fusion of the labia minora except anteriorly, where a small opening was noted. There were no visible skin lesions.

After counseling and obtaining written informed consent, surgical adhesiolysis was performed under spinal anesthesia, with caution taken to preserve her virginity. The edges of the wound were sutured using Vicryl 3-0. She was advised to apply petroleum jelly to the affected area for three weeks. At her follow-up visit two months later, the wound was found to be completely healed.

Figure 3. Labial adhesion before surgical correction

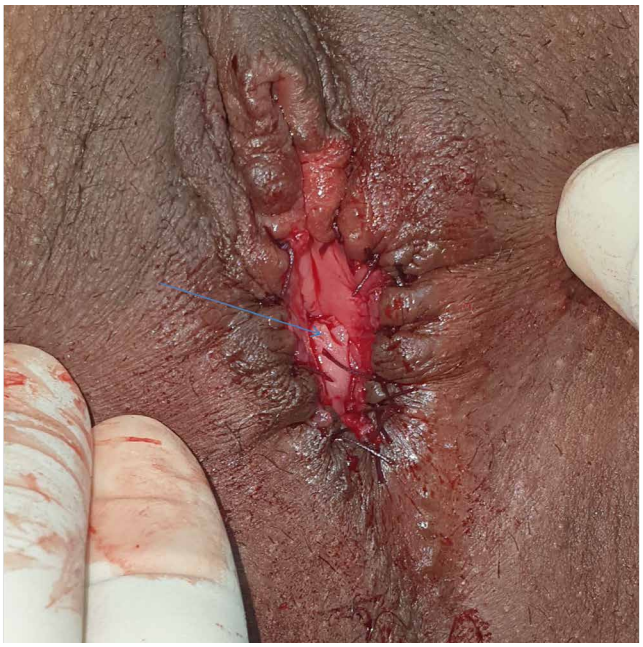

Figure 4. After surgical correction of labial adhesions (thin arrow indicating intact hymen)

Discussion

Labial fusion, while common in children, is a rare clinical entity in adults and even more so in reproductive-age women. The exact etiology of labial adhesions in this age group remains unclear. In prepubertal girls, a relatively hypoestrogenic environment and sexual abuse or genital trauma are considered major predisposing factors. In adults, labial fusion has been associated with recurrent urinary tract infections, vulvovaginitis, genital trauma, hypoestrogenism, and lack of sexual activity. In some cases, a diagnosis of lichen sclerosis was made following a punch biopsy.

Although reproductive-aged women typically have normal levels of sex hormones, which are thought to be protective against this condition, labial adhesions can still occur. In the second case presented, a history of perineal tear and ongoing breastfeeding may have contributed to the development of labial adhesion. No clear risk factor was identified in the first case, and the patient was unaware of when the condition began.

Current postpartum perineal care guidelines often recommend separating the labia during urination and cleansing the perineum regularly with a peri bottle or sitz bath. These practices may help prevent the formation of tissue bridges, particularly in women with unrepaired labial lacerations.

Although a hypoestrogenic state in the immediate postpartum period has been hypothesized to contribute to labial adhesion formation, the failure of topical estrogen therapy in such cases challenges this theory. Moreover, postpartum adhesions typically present as tissue bridges or bands rather than thin membranes.

Labial adhesion recurrence rates range from 11% to 14%. Recurrent adhesions, especially those that occur post-surgically, tend to be denser and less likely to respond to conservative treatment. In our cases, both patients were in an estrogenic state, as evidenced by regular menstruation, and presented with dense adhesions. Thus, topical estrogen and steroid creams were not attempted, and surgical adhesiolysis was performed. Postoperatively, both patients were advised to apply petroleum jelly to the affected area to aid healing and reduce recurrence risk.

Conclusion

Although labial adhesions are rare in reproductive-age women, they should be considered in the differential diagnosis of women presenting with prolonged menstrual periods or difficulty with penetrative sexual intercourse. Timely diagnosis and prompt management are essential for achieving favorable clinical outcomes.

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