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Case Report

An unusual clinical presentation of labial fusion in post pubertal period

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ABSTRACT

Labial fusion is sealing of labia minora in midline, also known as labial adhesion or labial agglutination or synechia vulvae. This condition is common in pre-pubertal females usually asymptomatic when oestrogen levels are low and commonly resolves spontaneously post-puberty if unresolved medical treatment includes use of estrogen cream or betamethasone cream application, very rarely surgical treatment required, if not responding to medical treatment due to dense adhesions. This case report is unusual as it has presented in a post-pubertal female requiring surgical management.

Keywords: Labial adhesion, Labial agglutination, Labial fusion, Synechia vulvae, Surgical excision

INTRODUCTION

Labial fusion occurs when both the lips of labia minora around the vaginal introitus become fused together or covered with a fleshy membrane. The membrane usually completely seals the vaginal opening, leaving a very small opening at the front through which urine or menstrual blood passes. It is also known as labial agglutination or labial adhesion. Labial fusion affects 2-5% of babies and young girls, most commonly seen between 1-2 years of age.¹

CASE REPORT

An eighteen-year-old female presented to gynaecological OPD with complain of passing urine and menstrual blood with a single small opening for 4 years after her attainment of menarche at 14 years of age. Her menstrual cycle was regular, normal in amount and duration with occasional mild dysmenorrhea. On examination she has well developed secondary sexual characters. There was no history of sexual abuse, trauma and allergic rash over external genitalia in past. Her general and systemic examination was normal. On per abdominal examination-

normal. On local examination of genitals, labia majora was normal and labia minora was densely and firmly fused in midline. Urethral opening was not visualized, and Perineum was normal, no scar mark on the external genitalia visible except a small circular opening visualized near fourchette (Figure 1). On per rectal examination, uterus and cervix felt with evidence of no vaginal ballooning.



Figure 1: Small circular opening near fourchette.

Ultrasound showed uterus anteverted and normal size, bilateral ovaries were normal. All routine investigations needed for surgery were done and noted normal. So, the case was diagnosed as labial fusion and treated surgically.



Figure 2: Layer by layer dissection.



Figure 3: Dissection for visualization of urethra.

A decision for labia minora reconstruction was taken. The fused tissue from introital opening dissected layer by layer and opened anteriorly (Figure 2). Anterior wall of vagina was seen. Normal rugosity was maintained. Sharp and blunt dissection was carried upwards to visualize the urethral opening (Figure 3). The urethral meatal opening was seen 1 cm below the clitoris. A catheter was passed through it. The final appearance of vagina inside which healthy cervix is visualized with a catheter in urethra. Post-operative course was uneventful. An antibiotic ointment and estrogen cream for local application was given. Catheter was removed on day 3. Patient passed urine uneventfully.

DISCUSSION

The external female genitalia consist of labia majora and labia minora with the two labia minora lie on either side of vagina and urethra. In labial adhesion the labia minora get adhered to each other. It usually noticed by parents in toddler age group as a fleshy membrane joining the labia minora of vulva, completely concealing the vaginal opening and leaving only a very small opening at the

front through which she passes urine. It gives an impression of absent vagina. In severe cases, there may be inability to pass urine. The exact cause is unknown, but it is suspected that labial adhesions are caused by irritation of the external genitalia. Causes may be feces, urine, strong perfumed soaps, vulvovaginitis, atopic dermatitis, labial injuries, sexual abuse. Low estrogen levels are also thought to contribute to development of such adhesions.

The condition usually resolves during puberty because the effect of estrogen changes the cells that line the genitals. It is generally asymptomatic but can also present with complaint of urine pooling in vagina on voiding followed by leakage from the vagina on standing after voiding or changes in the direction of urine stream. In about 20% of girls, asymptomatic bacteriuria develops and up to 40% experience symptomatic urinary tract infections. The medical treatment of labial adhesions for young girls include application of conjugated estrogen or estradiol vaginal cream (0.01%) to the adhesions (1-2 times) daily for several weeks until resolution of adhesion.³ While there are no available randomized controlled trials, the success rate of such creams is reported in the literature to be close to 90% with minimal recurrence.^{4,6} An alternative line of treatment is topical 0.05% betamethasone cream of twice daily betamethasone for 4-6 weeks have showed promising results.⁷ Adhesions if dense or not responding to medical treatment may require surgical management. Which includes division by gentle traction or running a sound along the fusion line.⁸ Once the labial adhesions are separated, emollient such as antibiotic ointment applied several times a day to prevent adhesion formation. The recurrence rate of labial adhesions after surgery is 11-14%.⁹ Such adhesions especially post-surgical are denser and less likely to resolve with conservative line of management, necessitating the use of amniotic membrane, rotational skin flaps with varying rate of success.

CONCLUSION

Labial fusion rarely present in post pubertal period with urinary symptoms and sometimes requiring expertise of surgical management to avoid its recurrence.

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