

CHAPTER 116

LABIAL ADHESIONS/AGGLUTINATION

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Introduction

Labial agglutination, also known as labial adhesions, vulvar fusion, or vulvar synachia, describes the apposition of the labia minora, which may be complete or partial.¹ It constitutes one of the minor gynaecological conditions in prepubertal girls that may present to the paediatric surgeon.

Demographics

There are few reports from Africa on epidemiology of labial agglutination. A hospital-based study from Nigeria has put the prevalence at 3%.² In the United States, the incidence is between 1% and 5%;^{3,4} however, the incidence is likely to be higher because most patients are asymptomatic and will not present to the hospital. Although labial agglutination is a disease that affects prepubertal girls, there are reports that it may occur in postpubertal girls, but these cases usually follow trigger factors such as trauma and sexual abuse.⁵ The peak age of incidence is the second year of life.³

Aetiology and Pathophysiology

The aetiology of labial agglutination is unknown; however, low oestrogen levels are a possible cause in this age group.⁶ Other causes include vulvitis, trauma, and—in Africa—the practice of female genital cutting (mutilation) (FGC(M)), which predisposes to labial fusion as a complication.^{7,8}

Labial agglutination is an acquired disorder. Studies on newborns did not show any infants with this condition.³ Inflammation of the labial epithelium from either trauma or infection in a background of low levels of oestrogen results in denuded epithelium. Healing of the epithelium thereafter results in the adhesion.

Clinical Presentation

Labial agglutination is often asymptomatic. Most who present to hospital do so after their parents observe that the “vaginal opening” is not visible (Figure 116.1). Others will present because of urinary leakage from a small hole during micturition or difficulty in micturition. Some adolescent girls present with haematocolpos following menarche.

Presentation in hospital may be for another condition, and the physician (paediatrician or general practitioner) may pick up the labial agglutination. There is usually extreme parental anxiety, but this is disproportionate to the simple nature of the lesion.

Careful physical examination should be made in all cases. The labia majora are usually present and easily separated. The labia minora are fused together in the midline; fusion is complete if it is from the clitoris to the posterior vestibule and partial if there is some separation between the labia minora. The diagnosis of labial agglutination is clinical, and investigation of the upper genital tract is not necessary.

Differential diagnoses include imperforate hymen or scarring of the labia minora in girls who have had FGC(M), in which the labia majora may have been excised partially or completely. Others include absent vagina and scarring of the labia minora following sexual abuse and certain forms of intersexuality and cloacal malformation.



Figure 116.1: Preseparation appearance of labial agglutination.



Figure 116.2: Postseparation appearance of labial agglutination.

Management

The care of the female child with labial minora should include the relief of parental anxiety as well as health education on perineal hygiene, especially in the African setting. Wiping the perineum from the front to the back after defecation, frequent change of diapers, and avoidance of irritant ones are important to the overall success of the treatment given to the child.⁹

Specific treatment measures can be medical or surgical. Gentle application of oestrogen cream topically to the fused labia twice daily for a variable period of between 2 to 6 weeks has been found to lead to separation of the labia.

Surgical separation (Figure 116.2) using a topical anaesthetic agent such as a eutectic mixture of local anaesthetics (EMLA) cream (in this case, lidocaine and prilocaine) or xylocaine cream with the separation effected using “mosquito” artery forceps can be carried out in the clinic. In older children who may not cooperate, separation under general anaesthesia can be done in the theatre. There may be slight bleeding, but this resolves spontaneously. Postoperatively, petroleum jelly, such as Vaseline®, may be applied to prevent recurrence or it can be combined with medical treatment using oestrogen cream.

Postoperative Complications

Minor haemorrhage may occur postoperatively, but it is unusual for it to be troublesome. Recurrence is the most common complication (with rates of up to 39% in some series), especially if the other supportive measures are not meticulously followed. Treatment of recurrent labial agglutination can be managed either medically by oestrogen cream or surgically. Hyperpigmentation of the skin may result from the application of topical oestrogen cream, but it usually resolves with discontinuation after treatment.

Prognosis and Outcome

The prognosis is good. Most asymptomatic cases usually resolve at puberty with the increase in circulating oestrogen levels. For symptomatic cases following separation, the outcomes are equally good.

Prevention

Health education for the parents is important to promote good hygienic practice to prevent irritation of the perineum in their child, with clear instructions on what to do in order to prevent recurrence as well as the same condition in their other children.

Evidence-Based Research

Table 116.1 presents a prospective study that compares the outcomes of treatment using conservative treatment methods with topical application of oestrogen cream alone with surgical manual separation of the labia and a combination of surgery with adjuvant application of oestrogen cream.

Table 116.1: Evidence-based research.

Title	Topical estrogen therapy in labial adhesions in children: therapeutic or prophylactic?
Authors	Soyer T
Institution	Ankara Güven Hospital, Department of Pediatric Surgery, Ankara, Turkey
Reference	J Pediatr Adolesc Gynecol 2007; 20:241–244
Problem	Role of topical oestrogen application and surgery in treatment of labial agglutination
Intervention	Topical application of oestrogen, surgical separation, combination of surgery and oestrogen application.
Comparison/control (quality of evidence)	Forty-nine patients were grouped into three groups: 18 were treated with oestrogen cream alone, 14 were treated by surgical separation of the fused labia minora, and 17 had surgical separation followed by topical application of oestrogen cream.
Outcome/effect	The success rate in those treated with oestrogen cream alone was 66.6% at the third month and 55.5% in the ninth month. Recurrence was experienced in 2 (11%) patients. There was a success rate of 85.7% in those who had surgical separation only, both in the 3rd and 9th months, and recurrence was 14.2%. All of the patients (100%) treated by manual separation with prophylaxis (MSP) recovered when followed up at 3 and 9 months. The topical oestrogen group had significantly lower success rates when compared to the other two groups ($P = 0.002$). There was no statistical difference between those who had surgery alone and those who had surgery and adjuvant oestrogen cream application and the MSP groups ($P = 0.196$).
Historical significance/comments	Labial agglutination can be successfully managed with oestrogen cream alone; however, the success rates are significantly lower when compared with surgical separation. Recurrence can be treated successfully with either topical oestrogen or surgery. A combination of surgical separation and adjuvant topical oestrogen may have a superior outcome. Larger series, however, may be necessary to validate this finding.

Key Summary Points

1. Labial agglutination is one of the gynaecological conditions in prepubertal girls that may present to the paediatric surgeon.
2. Although the aetiology is unknown, low levels of oestrogen have been implicated.
3. In Africa, female genital mutilation practices and sexual abuse of children are important causal factors.
4. Labial agglutination is often asymptomatic; however, urinary leakage following micturition and urinary tract infection can be the presenting complaints.
5. Diagnosis of labial agglutination is clinical, and invasive investigation of the genital tract should be avoided.
6. Differential diagnosis includes atresia of the vagina, imperforate hymen, and ambiguous genitalia and cloacal malformation.
7. Treatment includes use of topical oestrogen or surgical separation or a combination of both, which has lower recurrence rates.
8. Health education on perineal hygiene is vital to prevention of the condition and avoids recurrence after treatment.
9. An important aspect of the treatment of this simple condition is to relieve parental anxiety.

References

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