

Is There Any Relationship between Labial Synechia & Mullerian Duct Anomalies/Agenesis?

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ABSTRACT

Objective: The aim of this study was to evaluate the relationship between Labial Synechia & Mullerian Duct Anomalies.

Material and methods: We studied 102 girls with labial synechia who visited Pediatric surgery OPD of GSVM Medical College, Kanpur India after prospective analysis of last 24 months. Each girl was undergone USG pelvic region for any evidence of Mullerian duct anomalies.

Results: According to our observation, there was no relationship between Labial Synechia and Mullerian Duct Anomalies.

Conclusion: Our study suggests that in young females Labial synechia is not related to Mullerian Duct Anomalies. In our opinion, for further confirming the point retrospective study enquiring patients of already diagnosed Mullerian duct anomalies for Labial synechia can be done. Our study also suggests that poor perineal hygiene and low socioeconomic status is a significant factor for development of Labial Synechia in developing countries.

Keywords: Labial synechia, Labial adhesions, Mullerian duct anomalies/agenesis

INTRODUCTION

Labial synechia (also referred to as Labial Adhesions) is almost certainly an acquired condition in prepubertal females.^[1]

They are a fusion of labia minora in the midline, are usually asymptomatic and is often first noticed by parents or during a routine physical examination.^[2] They most

commonly occur between 3 months and 3 years of life.

Although labial adhesions are generally asymptomatic, the following may be noted:

- Post-void dribbling of urine or vaginal voiding
- Associated urinary tract infection (UTI)^[3]
- Discomfort with voiding

The following physical findings may be present:

- Thin, pale, semi-translucent adhesions covering the vaginal opening between the labia minora, sometimes entirely closing the vaginal opening, typically beginning posteriorly and progressing a variable distance anteriorly toward the clitoris
- Other interlabial masses or genital anomalies
- Signs of sexual abuse^[4,5]

Conditions to be considered in the differential diagnosis include the following:

- Hymenal skin tags
- Vaginal atresia or Mullerian agenesis
- Imperforate hymen
- Introital cysts (paraurethral or Gartner duct cysts)

Some recommend routine urine culture in children with labial adhesions,^[3] but this is usually done if patients have any urinary symptoms.

Labial adhesions can often be managed with manual separation of Labia followed by topical estrogen cream application for 8 weeks with local cleanliness with periodic observation.^[6,7,8] Because labial adhesions are usually asymptomatic and rarely constitute an emergency, follow-up care should be provided in the office of the paediatrician, or a pediatric surgeon.

MATERIALS AND METHODS

Study consisted of 102 children who visited the pediatric surgery OPD of GSVM medical college, Kanpur, India; within 24 months between September 2017 to September 2019. The diagnosis of labial synechia was made on perineal inspection and examination. Records of patients with labial synechia were studied in details, and

the following information was noted- patient's age, duration of labial synechia, history of urinary infection, history of trauma, history and physical findings consistent with sexual misuse, other physical findings (particularly evidence of seborrheic or atopic dermatitis, perineal hygiene), therapeutic intervention, socioeconomic status and follow-up evaluation. Urine analysis was performed in all patients. All patients were examined by ultrasonographic examination of pelvic region for any evidence of Mullerian duct anomalies. All patients were treated by Manual Separation of Labia by tip of Infant feeding tube 8 FG, followed by topical application of Estrogen cream for 8 weeks and continued vigilance on the part of the parents to keep the perineal area clean and dry.

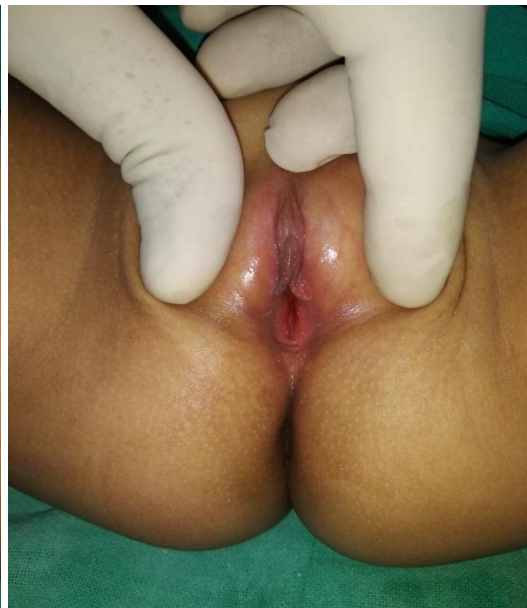


Fig. 1: Clinical picture before release of labial synechia Fig. 2: Clinical picture after release of labial synechia

RESULTS

Patients age in our study ranged from 6 months to 6 years, mean age was 13 months. The physical examination, apart from genital findings was normal in all patients. No patient had physical evidence of seborrheic or atopic dermatitis or a specific history of trauma or sexual misuse. 86 patients (84.3%) have poor perineal hygiene. 93 patients (91.2%) were from low socioeconomic status. No patient had

history of recurrent urinary tract infection. Urine cultures were negative in all patients except for two children (1.9%). Two patients (1.9%), 6 month old and 1.5 years old, had a documented urinary tract infection with E.coli. After antibiotic therapy as per the culture reports, urine cultures were negative in these babies.

In Two patients (1.9%), re-fusion after cessation of therapy was noticed; one was 8 months old and second 1 year old. On

taking history and examination, recurrence seems to be due to poor perineal hygiene of babies. Manual Separation therapy was repeated along with topical application of estrogen cream. Re-fusion does not occur after re-treatment in both patients. One feature of our study was; that in none of the case, features of Mullerian duct agenesis was seen on USG pelvis examination.

DISCUSSIONS

The exact cause of labial fusion is unknown, but it was uniformly suggested that it is an acquired condition. [1] Some studies have reported its association with Mullerian duct anomalies.

While the literature states that labial synechia is a frequent occurrence, prevalence of this condition in the pediatric population is uncertain. This pathology needs a careful examination, as it can be easily missed or misdiagnosed as imperforate hymen and with the congenital anorectal anomalies of the region. According to our data, the peak incidence is at 11 to 15 months of age (66.7%).

Age (in months)	Patients	
	Number	Percentage
<6 months	00	00%
6-10 months	19	18.6%
11-15 months	68	66.7%
16-20 months	12	11.8%
>20 months	03	2.9%

Current opinion about the underlying mechanism is the denuding of the upper squamous epithelial layer of the labial mucosa, with subsequent formation of a flimsy connective tissue bridge between the healing labia. There are many theories about the occurrence of labial synechia. Low estrogen levels in the prepubescent girl, [9,10] but this is a normal situation, may predispose to labial adhesions. Adequate endogenous estrogen changes the vaginal epithelium from a thin atrophic lining to a thick one containing glycogen. In addition the neutral pH of the vaginal secretions in prepubertal girl predisposes to inflammation and infection. The role of trauma in the development of labial synechia has been

previously explored. Eliciting a history of sexual abuse on the basis of the physical examination is dependent on the presence of abnormal genital and/or anal findings. [4,5] However, no patient in our series had any of these conditions (p-value <0.0001).

Leung and Robson et al reported that a urine culture be performed in children with labial fusion and that all girls with UTI should be checked for labial fusion. But urinary infections were detected in only two of the patient in our study (1.6%, p-value <0.0001). [3]

In the infants, feces and urine in perineal area, as well as occlusive diapers, may inflame the labial mucosa and leads to fusion. In our study, 86 patients (84.3%) have poor perineal hygiene and 93 patients (91.2%) were from low socioeconomic status. So, poor perineal hygiene along with low socioeconomic status seems to be significant factor (p-value <0.0001) in formation of Labial synechia specially in developing world.

In our study, we does not found any case of labial synechia to be having evidence of Mullerian duct anomalies on screening by pelvic Ultrasonography (p-value <0.0001).

In summary, our study suggests that in young females Labial synechia is not related to Mullerian Duct Anomalies. In our opinion, for further confirming the point, more studies are needed. One study may be to retrospectively enquire all patients of already diagnosed Mullerian duct anomalies for Labial synechia.

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