



CODEN [USA]: IAJ PBB

ISSN: 2349-7750

## INDO AMERICAN JOURNAL OF PHARMACEUTICAL SCIENCES

<http://doi.org/10.5281/zenodo.3362330>

Available online at: <http://www.iajps.com>

Research Article

### A STUDY OF EFFICIENCY OF DIFFERENT THERAPEUTIC METHODS FOR THE LABIAL ADHESIONS IN GIRLS

<sup>1</sup>Igor I. Ivanov, <sup>2</sup>Natalya V. Kosolapova

<sup>1,2</sup>Medical Academy named after S.I. Georgievsky (structural unit) of V.I. Vernadsky Crimean Federal University, 295006, Lenin boulevard, 5/7, Simferopol, Crimea Republic, Russian Federation.

**Article Received:** June 2019

**Accepted:** July 2019

**Published:** August 2019

**Abstract:**

*The article presents the results of a clinical and statistical analysis of medical documentation of girls were diagnosed with labial adhesions.*

**Materials and methods.** *A retrospective clinical and statistical review was performed of 43 girls aged 2 months to 7 years diagnosed with labial adhesions in the Female Welfare Center (Simferopol, Crimea) between 2014 and 2019. Depending on the treatment received, the girls were divided into 3 groups. Group I included 13 girls with total (5) or subtotal (8) adhesions, who underwent an operative separation of adhesions of the labia minora. Group II included 14 girls with partial (4) or subtotal (10) adhesions, received application of the estriol cream. Group III included 16 girls with partial adhesions, which were suggested to be observed without a primary separation. The results of treatment were categorized to complete cure, relapse with persistence of adhesions or relapse with progression of adhesions. Statistica V.6.0. was in use for the analysis of data. Percentages were in use for the presentation of the categorical information.*

**Results and discussion.** *The highest percentage of complete cure was in Group 2 - 57.1%, 42.9% had a relapse with persistence. In the Group 1, complete cure was observed in 3 (23.0%), relapse with persistence - in 5 (38.5%). 5 (38.5%) girls had a relapse with progression, after the following applications of estriol cream, these girls finally present the relapse with persistence. In the Group 3, there were 2 cases of spontaneous separation of adhesions; in the remaining patients, there were persistence without complications.*

**Conclusion.** *Only total and partially subtotal labial adhesions with arrest of urination and development of secondary inflammatory processes of the external genital organs and organs of the urinary system are the subject to operative separation. In all other cases, a less traumatic and more effective method of treatment is the application of estriol cream. Partial asymptomatic adhesions are subject to dynamic observation without treatment.*

**Key words:** *girls; labial adhesions; treatment; estriol cream; relapse.*

**Corresponding author:**

**Igor I. Ivanov,**

2 Morozova st., Symferopol, 335000, Crimean Republic, Russian Federation;  
phone: +7 (978) 040-49-80; e-mail: gerikae@mail.ru;

ORCID: <http://orcid.org/0000-0002-5261-4851>

QR code



Please cite this article in press Igor I. Ivanov et al., A Study Of Efficiency Of Different Therapeutic Methods For The Labial Adhesions In Girls., Indo Am. J. P. Sci, 2019; 06(08).

**INTRODUCTION:**

Labial adhesions (labial agglutinations, vulvae adhesions, vulvae sinechia etc.) are a frequent clinical finding in preschool children, the most commonly occur between 3 months and 6 years of life. Labial adhesions are defined as the complete or partial fusion of the pudendal cleft due to the agglutination of the labia minora in the midline [1; 2].

Pathology is first described back in XVIII, but it remains actual today, the frequency is growing last 10-15 years, according to the literature [3].

The etiology and pathogenesis of the primary labial adhesions and their further relapse remain unclear. Many researchers point to the etiology of the disease, the significant role of the inflammation mucous membrane of vulva and vagina, low estrogen levels, the presence of factors causing irritation mucous membrane of labia minora, allergic and dermatological diseases in these children [4-6].

The clinical course of labial adhesions is often asymptomatic, but sometimes there are complaints from the urinary organs. Long-term persistence of adhesions with significant closure of the pudendal cleft can lead to impaired outflow of urine and vaginal discharge, leading to the development of secondary infection of the urinary system. At total adhesions, acute urinary retention may be observed [7].

Due to the lack of systemic knowledge about the etiopathogenesis of labial adhesions in girls, the choice of treatment tactics and optimal recommendations for the prevention of the disease are extremely difficult, leads to diverse, often unreasonably traumatic therapeutic effects [3; 7]. The literature describes various methods of treating adhesions: operative separation of adhesions by stretching them or using special tools, application of ointments with hormones - estrogens or glucocorticosteroids to the area of adhesions, the use of sit baths with decoctions of medicinal herbs, as well as various combinations of the above methods. However, at present, none of the proposed schemes guarantees the absence of recurrence of adhesions [8-11].

The lack of a unified knowledge of the etiopathogenesis of labial adhesions in girls, the lack of standard treatment regimens with proven efficacy and an increase in the number of relapses recently determine the relevance of our study.

The purpose of the study is to analyze the data of anamnesis, clinical and special gynecological examination, results of treatment and follow-up observation of girls with the labial adhesions.

**MATERIALS AND METHODS:**

A retrospective clinical and statistical review was performed of all girls diagnosed with labial adhesions in the Female Welfare Center (Simferopol, Crimea) between 2014 and 2019.

An important inclusion criterion was written informed consent from the parents of girls for a child's examination and personal data processing. The absence of such consent was a non-inclusion criterion. The exclusion criterion from the study was noncompliance by the girl and parents of medical prescriptions.

According to the criteria, a retrospective clinical and statistical analysis of medical records was conducted for 43 girls aged 2 months to 7 years with labial adhesions. 5 (11.6%) girls were diagnosed with complete (total) adhesions, 18 (41.9%) – with subcomplete (subtotal) adhesions and 20 (46.5%) – with partial adhesions that close less than a half of pudendal cleft.

Anamnestic data was collected from the parents of the girls studied according to the standard questionnaires. During a gynecological examination, the development of secondary sexual characteristics, the size and density of adhesions of the labia minora, and signs of inflammation of the vulva and vagina were evaluated. Microscopy of vaginal secretions was carried out, in the presence of signs of vulvovaginitis, an additional examination was conducted for the presence of sexually transmitted infections, using immunofluorescent analysis and polymerase chain reaction.

The choice of treatment tactics was made depending on the degree of adhesion of the labia minora, the presence of difficulties in urination and signs of the accompanying inflammation of the external genital organs and / or urinary organs. In the presence of concomitant inflammation of the external genital organs, appropriate anti-inflammatory treatment was prescribed. The parents of all the girls were interviewed about following the age-appropriate diet and hygiene of the external genital organs.

Depending on the treatment received, the girls were divided into 3 groups. Group I included 13 girls (mean age  $1.6 \pm 1.2$  years) with total (5) or subtotal (8) adhesions, who underwent an operative separation

of adhesions of the labia minora. Group II included 14 girls (mean age  $3.2 \pm 1.0$  years) with partial (4) or subtotal (10) adhesions, in which the labia minora were separated by application of the estriol cream to the region of adhesion. Application was made 2 times a day in a continuous mode, until complete separation of the adhesions. The maximum period of application needed is 6 weeks. Group III included 16 girls (mean age  $3.9 \pm 1.2$  years) with partial adhesions, which under the primary detection of adhesions of the labia minora were suggested to be observed without a primary separation. The results of treatment were categorized to complete cure, relapse with persistence of adhesions or relapse with progression of adhesions.

Statistical processing of the obtained data was performed using conventional methods of variation-statistical analysis using the standard software

package Statistica V.6.0. (StatSoft, Russia). Percentages were in use for the presentation of the categorical information.

### RESULTS AND DISCUSSION:

An aggravated allergic history was observed in 24 (55.6%) girls. Pathology of the urinary system was present in 20.9% of cases (crystalluria - in 6 girls, acute pyelonephritis - in 3 girls). Concomitant vulvovaginitis was detected in 9 (20.9%) girls, specific microbial flora was not revealed.

A gynecological examination of all girls revealed the development of the external genital organs of the female type, corresponding to the age (Stage 0 on Tanner).

The results of the treatment and further observation in the analyzed groups are presented in table 1.

**Table 1. The results of treatment and further observation for labial adhesions in the studied groups.**

Results of Treatment	Groups		
	Group 1 (n=13)	Group 2 (n=14)	Group 3 (n=16)
Complete cure	3 (23.0 %)	8 (57,1 %)	2 (12.5 %)
Relapse with persistence of adhesions	5 (38.5 %)	6 (42,9 %)	14 (87.5 %)
Relapse with progression of adhesions	5 (38.5 %)	0	0

As can be seen from table 1, the highest percentage of complete cure was observed in Group 2 - 57.1%, the remaining 42.9% of patients had a relapse of labial adhesions with a small closing of the pudendal cleft with their further persistence without tendency to progression. The observation period for these girls was  $4.0 \pm 0.5$  years. None of the girls received applications of estriol cream, showed symptoms of precocious puberty.

In the Group 1, complete cure after surgical separation of the labia majora was observed in 3 (23.0%), recurrence with further persistence - in 5 (38.5%). 5 (38.5%) girls had a relapse of the adhesions with a progressive increase in their area, after the following applications of estriol cream to the area of adhesions, these girls finally present the persistent adhesion on a small area. The period of postoperative observation in this group was  $3.5 \pm 0.5$  years.

In the Group 3, there were 2 cases of spontaneous separation of adhesions in girls 5 and 7 years old; in the remaining patients, adhesions persisted without a tendency to progression without causing any discomfort. During the observation period -  $4.0 \pm 1.0$

years - in girls of this group there were no manifestations of secondary infection of the external genital organs and / or urinary system.

### CONCLUSION:

According to our study, for the adhesions of the labia minora in girls, the allergic factor is the most important (more than half of the girls with adhesions have had an accidents history of 55.6%), inflammatory diseases of the external genital organs and urinary system pathology were found in 20.9% girls, accordingly. So, the prevention, timely detection and correction of allergic reactions in girls of preschool age will reduce the frequency of the initial appearance of adhesions of the labia minora and their recurrence.

In our opinion, only total and partially subtotal adhesions with impaired urination and the development of secondary inflammatory disorders of the external genital organs and organs of the urinary system are subject to operative separation. In all other cases, applications of estriol cream on the area of adhesions to their complete separation are much less traumatic and more effective treatment method. Partial asymptomatic adhesions, which slightly close

the pudendal cleft and do not lead to the secondary inflammatory processes, are subject to dynamic observation without treatment.

#### REFERENCES:

1. Rubinstein A, Rahman G, Risso P, Ocampo D. Labial adhesions: Experience in a children's hospital. Arch Argent Pediatr. 2018 Feb;116(1):65-68. doi: 10.5546/aap.2018.eng.65.
2. Bacon JL, Romano ME, Quint EH. Clinical Recommendation: Labial Adhesions. J Pediatr Adolesc Gynecol. 2015 Oct;28(5):405-9. doi: 10.1016/j.jpag.2015.04.010. Epub 2015 Apr 24.
3. Granada C., Sokkary N., Sangi-Haghpeykar H., Dietrich J. E. Labial adhesions and outcomes of office management. J Pediatr Adolesc Gynecol. 2015 Apr;28(2):109-13. doi: 10.1016/j.jpag.2014.06.004. Epub 2014 Jun 25.
4. Bacon J.L. Prepubertal labial adhesions: Evaluation of a referral population // Am. J. Obstet. Gynecol. 2002. Vol. 187. P. 327.
5. Samuels E., Ocheke A. N., Samuels N. E. Labial adhesion in children at the Jos University Teaching Hospital. Afr J Paediatr Surg. 2016 Jan-Mar;13(1):6-8. doi: 10.4103/0189-6725.181622.
6. Melek E., Kılıçbay F., Sarikaş N. G., Bayazit A. K. Labial adhesion and urinary tract problems: The importance of genital examination. J Pediatr Urol. 2016 Apr;12(2):111.e1-5. doi: 10.1016/j.jpuro.2015.10.002. Epub 2015 Oct 23.
7. Bussen S., Eckert A., Schmidt U., Sütterlin M. Comparison of Conservative and Surgical Therapy Concepts for Synechia of the Labia in Pre-Pubertal Girls. Geburtshilfe Frauenheilkd. 2016 Apr;76(4):390-395. Doi: 10.1055/s-0035-1558101
8. Morić B. V., Lesar T. Treatment modalities of labial fusion in prepubertal girls. Acta Med Croatica. 2014 Dec;68(4-5):389-92.
9. Goldman R. D. Child health update: estrogen cream for labial adhesion in girls. Can Fam Physician. 2013 Jan;59(1):37-8.
10. Eroğlu E., Yip M., Oktar T., Kayiran S. M., Mocan H. How should we treat prepubertal labial adhesions? Retrospective comparison of topical treatments: estrogen only, betamethasone only, and combination estrogen and betamethasone. J Pediatr Adolesc Gynecol. 2011 Dec;24(6):389-91. doi: 10.1016/j.jpag.2011.07.015. Epub 2011 Sep 25.
11. Soyer T. Topical estrogen therapy in labial adhesions in children: therapeutic or prophylactic? J Pediatr Adolesc Gynecol. 2007 Aug;20(4):241-4. Doi: 10.1016/j.jpag.2006.09.015.