

## Large Bartholin's Gland Cyst in a Premenarchal Girl: A Rare Clinical Finding

Nusret Popovic<sup>1\*</sup>

Zlatan Zvizdic<sup>1</sup>

Emir Milisic<sup>1</sup>

Asmir Jonuzi<sup>1</sup>

Azra Karamustafic<sup>1</sup>

<sup>1</sup>Clinic of Pediatric Surgery, University Clinical Center Sarajevo, 71000 Sarajevo, Bosnia and Herzegovina

\*Address for Corresponder: Dr. Nusret Popovic, Clinic of Pediatric Surgery, University Clinical Center Sarajevo, 71000 Sarajevo, Bosnia and Herzegovina

(email: popovic.nusret@bih.net.ba)

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### Abstract

Disorders related to Bartholin's duct and glands affect approximately 2% of young women, and are very rare in premenarchal girls. Bartholin's gland cysts are usually small, do not cause any symptoms and resolve spontaneously. However, symptomatic larger cysts require medical treatment. Although many treatment modalities have been applied, the best approach has not yet been found. Treatment modalities of Bartholin's cyst include application of silver nitrate to the abscess cavity, incision and drainage of the cyst, curettage of the abscess cavity, placement of "Word catheter", marsupialization, needle aspiration and alcohol sclerotherapy, carbon dioxide laser excision and surgical gland excision. Here, we report a case of a large, soft, regular contoured painless Bartholin's cyst located in the left labia minora with a diameter of 8 x 5 cm in an 11-year-old premenarchal girl, treated by surgical gland excision after previous unsuccessful incision and aspiration of the cyst.

### Keywords

- Bartholin's gland cyst
- premenarchal children
- treatment

## Introduction

Bartholin's glands (greater vestibular glands) are two pea-sized glands which can be found at the posterior introitus of vagina and secrete mucus for lubrication of vagina.<sup>1</sup> Normally, Bartholin's glands can not be palpated but they can become palpable when cystic formation or abscess occurs. Bartholin's gland cyst occurs when obstruction of the distal Bartholin's duct results in retention of mucus secretions.<sup>1</sup> Infection of Bartholin's gland cyst may result in the development of abscess.<sup>2</sup> Bartholin's gland cysts affect 2% of women, usually in the reproductive years, between 20 and 30 years of age.<sup>3,4</sup> They are exceedingly rare before puberty.<sup>4</sup> Smaller cysts may be asymptomatic and can be left untreated yet larger cysts require treatment. Different treatment options include: incision and drainage, applying silver nitrate to the abscess cavity, curettage of the abscess cavity, placement of Word catheter, marsupialization, needle aspiration and sclerotherapy with alcohol, excision with carbon dioxide laser and surgical gland excision.<sup>4,5,6</sup>

We report a rare case of Bartholin's gland cyst in an 11-year-old premenarchal girl treated by surgical gland excision.

## Case report

An 11-year-old premenarchal girl was admitted to our institution with the complaint of painless left labial swelling from three months ago. In the first month, the cyst had reached the present diameter of 8x5 cm. A month before the current admission, the attending gynecologist performed incision and aspiration of clear fluid but fast re-accumulation

of fluid and recurrence of the cyst occurred. Her medical history was unremarkable.

Physical examination revealed an 8 cm diameter soft, regular contoured painless mass in left labia minora **Figure 1A**. The girl underwent surgery and the cyst was easily dissected from surrounding tissue **Figure 1B**. The cyst was removed completely without major bleeding or rupture **Figure 1C**.

There were no complications postoperatively and patient was discharged in the third postoperative day. After one year of follow-up, examination of labia showed a good cosmetic appearance and no recurrence of the cyst.

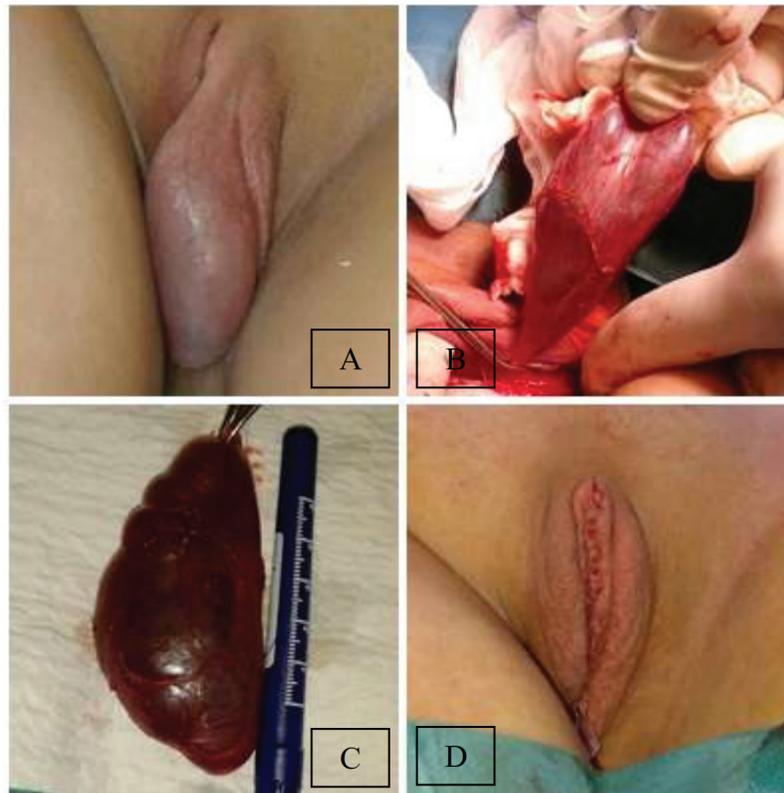
## Discussion

Disorders of Bartholin's duct and glands are very rare in premenarchal girls unlike the girls at puberty in whom the glands begin to secrete a fluid into the vaginal vestibule with the possibility of development of cysts and abscesses.

The reported incidence of Bartholin's cysts is about 2% and the most common age of presentation is the third decade.<sup>3,4</sup> Bartholin's cysts are exceedingly rare before puberty.<sup>5,7</sup> Differential diagnosis of labial enlargement in prepubertal girls include rare diseases such as lipoma, leiomyoma, teratoma, sarcoma, lymphangioma, hydrocele of the canal of Nuck, meconium hydrocele, indirect inguinal hernia, congenital labial cyst, epidermoid cyst or estrogenic effects.<sup>8</sup>

Echocardiography of the groin is a simple and accurate diagnostic procedure.<sup>7</sup> A definitive diagnosis is made intraoperatively and histologically.

Treatment for Bartholin cysts varies depending



**Figure 1A-D:** (A): Preoperative presentation of left sided labial swelling; (B): Intraoperative view of the removal of Bartholin's cyst; (C): Gross macroscopic pathologic specimen of Bartholin's cyst; (D): Early postoperative appearance of genital region

upon the size and symptoms that they cause. Small cyst (1-3 cm) that are not infected remain asymptomatic and do not need intervention.<sup>5</sup> Larger cyst commonly cause pain during sitting, walking or sexual intercourse as well as psychological alteration and will require active intervention. Incision and drainage is the simplest treatment but in 5-15% of cases recurrence occurs.<sup>3</sup> Other

available options have been mentioned in the introduction.<sup>4,5,6</sup>

In conclusion, although Bartholin's cysts are exceedingly rare in the pediatric age group, it should be considered in the differential diagnosis of any labial enlargement in pediatric premenarchal girls.

**Conflict of Interest**

There is no conflict of interest.

**ORCID ID**

Nusret Popovic  <https://orcid.org/0000-0001-7130-814X>

**References**

1. Omole F, Simmons BJ, Hacker Y: Management of Bartholin's duct cyst and gland abscess. *Am Fam Physician* 2003; 68:135-140.
2. Lee MY, Dalpiaz A, Schwamb R, et al: Clinical Pathology of Bartholin's Glands: A Review of the Literature. *Curr Urol* 2015; 8(1):22-25.
3. Folashade O, Barbara J, Simmons, et al: Management of Bartholin's Duct Cyst and Gland Abscess. *Am Fam Physician* 2003; 68:135-140.
4. Patil S, Sultan AH, Thakar R: Bartholin's cysts and abscesses. *J Obstet Gynaecol* 2007; 27(3):241-245.
5. Singh JK, Viruthagiri A, Sadasivan J: Bartholin's gland abscess – a rarity in infants and children. *Curr Pediatr Res* 2010; 14 (1):63-64.
6. Speck NM, Boechat KP, Santos GM, et al: Treatment of Bartholin gland cyst with CO<sub>2</sub> laser. *Einstein (Sao Paulo)* 2016; 14(1):25-29.
7. El Kady S, Al Zahrani A, Jednak R, et al: Bartholin's gland abscess in a neonate: a case report. *Can Urol Assoc J* 2007; 1(2): 117-119.
8. Hill DA, Lense JJ: Office management of Bartholin gland cysts and abscesses. *Am Fam Physician* 1998; 57:1611-6,1619-1620.