

DOI: <https://dx.doi.org/10.18203/2320-1770.ijrcog20264011>

Case Series

A case series of labiaplasty for a rare medical condition: bilateral fibroepithelial polyps of the labia minora in a young female

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Received: 19 September 2026

Revised: 21 October 2026

Accepted: 23 October 2026

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ABSTRACT

Fibro epithelial polyp (FEP) of labia minora is extremely rare benign mesenchymal tumor of female lower genital tract, mostly occurring in reproductive age groups. It is characterized by polypoid proliferations of stroma and tend to be either small fleshy masses or pedunculated in appearance. The lesions are often small and histologically benign in nature. However vulvar lesions like angiofibroblastoma, angiomyxoma, and sarcoma must be excluded by histopathological examination. Reactive hyperplastic processes in sub-epithelial mesenchymal tissues in the vulvo-vaginal area hypothesized a significant role in its development, potentially influenced by factors such as hormonal changes, inflammation, and underlying health conditions like obesity and diabetes mellitus. So far, there are very few published case reports on labial masses especially from labia minora FEPs. In this article we present three cases of fibro epithelial polyp of labia minora in young women who presented to us with complaints of bilateral labial hypertrophy. We excised the growth by performing labiaplasty by edge resection technique and histopathology of the excised tissue confirmed the diagnosis of FEP of the labia minora.

Keywords: Fibro epithelial Polyp, Labiaplasty, Labia minora hypertrophy, Vulvar disease, Benign lesion

INTRODUCTION

Labiaplasty is one of the most common female genital cosmetic surgeries and is growing more and more popular, with its incidence rising in the young population. Women are asking for labiaplasty either due to aesthetic reasons or functional issues.

In western countries, the most common reasons for labiaplasty are dissatisfaction with genital appearance however, in India, patients primarily seek this surgery for functional issues, which include physical discomfort when wearing tight clothing, leggings, or swimsuits, poor hygiene due to multiple labial folds, and stretching sensations during sexual activity.

Labia minora hypertrophy may be either congenital or acquired. Mechanical irritation is thought to contribute to

the acquired hypertrophy of the labia minora, the pathogenesis of which is likely multifactorial, involving hormonal changes, genetic predisposition, and environmental influences.

Hypertrophy of the labia minora is a subjective condition that may impact a woman's everyday activities and self-esteem owing to concern regarding valval appearance.¹

Fibro epithelial polyps (FEPs) of the labia minora are very uncommon. So far, there are very few published case reports on labial minora masses.²⁻⁷

However, in last 3 years, we managed three cases of fibro epithelial polyp in labia minora in young women who presented to our cosmetic gynaecology clinic with complaints of labial hypertrophy. We performed labiaplasty in all three cases primarily for medical reasons.

Post-surgical resection, histopathology confirmed the diagnosis of FEP of the labia minora in all 3 cases. For the benefit of medical fraternity, we shall briefly have described all three cases followed by a brief discussion on this rare diagnosis.

CASE SERIES

Case 1

A 25-year-old woman presented to our outpatient department with a complaint of a mass in her labia that had been slowly enlarging over the past 2.5 years, with more rapid growth occurring over the last year. This mass was associated with itching and stretching pain, making difficult for her to wear undergarments or tight lower clothing due to the discomfort and pain.

Clinical examination revealed bilateral hypertrophic labia minora, with the right-side measuring 5.2×4.3×2.3 cm and the left side measuring 5.1×4.2×2.2 cm on gross examination, tissue was cystic and oedematous in appearance. Upon pressing the tissue, a thick, white, caseous, foul-smelling material was discharged.

We sent this caseous material for microbiological examination, which was reported as normal cells. Additionally, we performed an ultrasonography of the labia, revealing a cystic, edematous mass with no signs of malignancy.

The patient expressed a desire to reduce the size of her labia due to the impact on her daily activities and overall discomfort.

After a comprehensive discussion of the benefits and risks of surgical correction, potential complications, and the possibility of recurrence, surgery was performed. The patient underwent bilateral labia minoraplasty using curvilinear edge resection technique (Figure 1).

The dissected labial specimen was sent for histopathological examination, which revealed a fibro epithelial polyp of the labia minora with hyperplastic labia, underlying loose oedematous fibrous tissue, numerous stellates to spindle cells, congested and dilated blood vessels, and inflammation.

After two years of follow-up, she has not experienced any recurrence of swelling. The patient has fully recovered and is satisfied with the results.

Case 2

A 26-year-old female reported to our OPD with hypertrophy of the labia. She initially observed swelling on the left side and sought treatment from a local practitioner, who conducted fluid aspiration, resulting in a temporary alleviation of the left labial swelling. After six months, she noted swelling on the right side, and despite

several courses of oral antibiotics, there was no regression of swelling.

The physical examination indicated bilateral hypertrophy of the labia minora, with the left labium measuring 5.1×3.8×1.8 cm and the right labium measuring 5.5×3.2×1.2 cm in dimension.

Bilateral labia minoraplasty was performed by using curvilinear edge resection technique and the excised labial specimen was sent for histopathological analysis, which verified the fibro epithelial polyp of labia. After 2 years of follow up there is no recurrence and patient is fully satisfied and living normal life.



Figure 1: Case 1 (a and b) bilateral labia minora hypertrophy (pre-surgery), and (c) after 1-month post labia minoraplasty surgery.

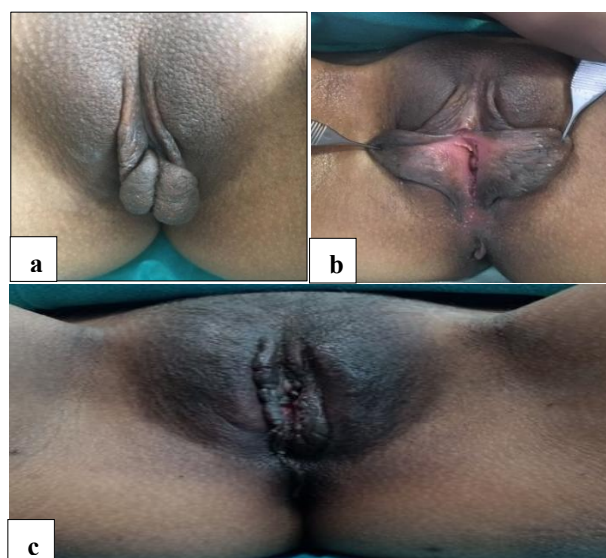


Figure 2: Case 2 (a and b) bilateral labia minora hypertrophy (pre surgery), and (c) after 1-month post labia minoraplasty.

Case 3

A 25-year-old unmarried woman presented to our OPD with complaints of pain and swelling in her genital area, along with difficulty and pain while walking. She reported a history of recurrent swelling in both labia minora. Upon examination, mild inflammation and swelling were observed in both labia minora. We recommended a course of antibiotics and anti-inflammatory drug to address the active inflammation. After 2 weeks all signs of inflammation had resolved, with the left labia minora measuring 4.5×3.6×2 cm and the right labia minora measuring 4.2×3.4×2.2 cm.

The patient then underwent bilateral labia minoraplasty by curvilinear edge resection technique. Histopathology of excised labia revealed a benign fibro epithelial polyp. The patient is now married and having normal sexual life with no recurrence after 2 years of follow-up.



Figure 3: Case 3 (a and b) bilateral labia minora hypertrophy (pre surgery), and (c) post labia minoraplasty (postop picture-after surgery).

DISCUSSION

FEP are typically asymptomatic but may be discovered during a routine gynaecological examination or reported by patients who have concerns about daily discomfort due to mass as well as worries about their genital appearance.

Three women who reported to us with unusual hypertrophy of labia minora at relatively younger age, and after doing careful evaluation and trying all conservative method of treatment, we decided to go ahead with the curative treatment, i.e. labiaplasty. We performed bilateral labia minoraplasty with edge resection technique and excised the hypertrophied labial tissue and sent it for histopathological examination, which revealed it was a FEP of the labia minora. We ensured is that the labia were

also left aesthetically appealing and symmetrical after surgery.

When we searched literature, our findings are totally in consonance with the published literature of FEP of labia minora. Most of reported cases on literature are on either FEP on vulva origin or origin from labia majora and after a thorough literature search, we go only a handful published cases on FEPs of labia minora.²⁻¹²

In 2011, Heller et al reported recurrent asymmetrical enlargement of labia minora in 54 years old postmenopausal, they excised labial minora mass and on histopathological report diagnosed as FEP of labia minora.²

In 2016, Avsar et al reported bilateral labial minora mass in 28 years old nulliparous women with psoriasis disease. They performed surgical excision of labial mass in view of rapid increasing in size and which was reported as stromal FEP on histopathological evaluation.³

In 2017, Avidime et al reported bilateral labial mass on 26 years old women with dragging sensation due to large labial mass, they excised bilateral mass and histopathology report confirmed its FEP of labia minora.⁴

In 2019, Arpacı et al reported FEP of right labia minora on 13 years old young female and they excised labial mass and on histopathological evaluation it was diagnosed as FEP. They did not get any associated history of inflammation, hormonal contraception, diabetes or systemic disease.⁵

In 2023, Kanamori et al reported a patient who underwent a unilateral labiaplasty on right side was diagnosed as FEP on HPE and after a year again had a swelling on left side, which was again resected and diagnosed as FEP on HPE, making an interesting observation that a patient can have recurrent FEP also in labia minora.⁷

In our case series, all patients have a history of infection and inflammation on the labial tissue, so this may be a predisposing factor for FEP development. We found no association of hormonal contraceptive or diabetes but they all had discomfort in day-to-day life due to enlarged labia. We excised labial mass by edge resection technique of labia minoraplasty and on histopathological evaluation of resected labial tissue in all case was diagnosed as stromal Fibro-epithelial polyp of labia minora. In 2005, Orosz et al also suggested chronic inflammation having a role in FEP development without any hormonal influence.¹⁰

Total excision is crucial in its treatment. In 2025, Orosz et al and other authors have reported the chances of recurrence so making excision from the nevus crucial with long-term follow-up to monitor for recurrence.^{7,10}

Also, sometimes FEP may present like malignant mass like appearance, so histopathological examination is also essential to rule out malignant neoplasm.⁶

CONCLUSION

FEP of the labia is a rare benign tumour but due various morphological appearances, sometimes may confused with malignant neoplasm. Therefore, it is essential to conduct a thorough pre-surgery clinical workup and a post-excision histopathological examination to rule out any atypia or malignancy. Additionally, due to the possibility of recurrence, long-term follow-up is necessary. It also brings in an important aspect that all gynaecologists must have knowledge of labiaplasty surgery to address her appearance as well as functional concern of labial mass as this remains the only curative procedure for management of medical condition like FEP of labia.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

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Cite this article as: Magon N, Prasad S. A case series of labiaplasty for a rare medical condition: bilateral fibroepithelial polyps of the labia minora in a young female. *Int J Reprod Contracept Obstet Gynecol* 2026;15:4579-82.