

Pyogenic Granuloma of The Vagina: An Unusual Complication of Marsupialization of Bartholin's Cyst

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Abstract

We report an unusual case of vagina Pyogenic Granuloma (PG) formation 4 months after marsupialization of Bartholin's cyst. A 42 year old nulliparous woman underwent marsupialization for Bartholin's cyst of the right labia majora. Following seemingly uncomplicated surgery and recovery, she presented with vaginal pain and post-coital bleeding of 3 months duration approximately 4 months postoperatively, and was found to have a pinkish-red growth on the lower third of the right lateral vaginal wall which bled on contact. The cervix was healthy looking. The vaginal growth was excised, and the overlying vaginal skin was then closed. She then made an uneventful recovery. Histopathological examination of the specimen showed tumor line by squamous epithelium with marked acanthosis and papillomatosis. The subepithelium was oedematous with proliferation of vascular channels, haemorrhage into the stroma and lymphoplasmacytic infiltrates. No malignancy was detected. The histopathological features were consistent with PG of the vagina. Pap smear result was normal.

Keywords

Pyogenic granuloma, Marsupialization, Bartholin's Cyst

I. Introduction

Pyogenic granulomas (PGs) (lobular capillary hemangioma) are benign vascular lesions,

which generally originate from skin and/or mucous membranes[1].PGs may develop at any age but are most often seen in children and young adults. They are equally common in males and females and exhibit no racial or

familial predisposition. Clinically, PG is a sessile or pedunculated, single erythematous, friable polypoid, and exophytic lesion, with a smooth or lobulated surface, that bleeds easily after minor trauma [2]. These lesions grow rapidly in size over several weeks or months. However the final size of the lesions rarely exceeds 1 cm in most cases. The lesions are mostly painless, or they can be slightly tender. The lesions are frequently found in the oral mucosa or on the trunk or limbs. Pyogenic granuloma of the vulva and vagina is a relatively rare finding, and a limited number of cases have been reported in the literature [3]. It has also been reported on the penis [4]. We present a patient with vagina pyogenic granuloma Post-marsupialization.

II. Case Report

A 42 year old nulliparous woman was admitted to our clinic with complaints of swelling over the right vulva. The swelling was first noticed about 6 months prior to presentation and gradually increased in size to its present state at presentation. There was associated dyspareunia but no bleeding per vagina. She was worried for her cosmetic presentation. Her gynecological examination revealed a swelling on the right labia majora which was about 4x3cm in diameter. The cervix was healthy looking. She subsequently had marsupialization and samples sent for histopathological examination which revealed a Bartholin's cyst. Her post-operative period was uneventful and she was discharged 48 hours later on antibiotics, analgesic and advised to continue sitz bath. Her previous consecutive Pap smear reports have all been

normal. The last was done 8 weeks post marsupialization.

She however presented 4 months later to our emergency unit with complaints of post-coital vaginal bleed. She resumed sexual activities two months after the surgery (marsupialization) with mild superficial dyspareunia. The bleeding was associated with mild blood clots necessitating her presentation to us immediately. Pelvic examination revealed a 1x1cm pedunculated and hemorrhagic growth on the lower 1/3rd of the right lateral vaginal wall which was tender. The cervix was healthy looking and not blood stained. The cervical Os was closed and the fornices were intact. The uterus and adnexae were normal following ultrasound examination. The painful mass was considered to be an infected fibroepithelial polypoid. Because she was suffering from severe pain and still bleeding from the mass, she was counselled for an urgent examination under anesthesia and excision of the mass in theater which she consented to. Under spinal anesthesia, the mass was excised completely and sent to pathology for definitive diagnosis. The patient was discharged in the first day after operation without any complication. Histopathological examination revealed a pyogenic granulomatous growth of the vagina. During the postoperative follow up period, the patient recovered completely with no recurrence of the lesion.

III. Discussion

Pyogenic granulomas are rapidly growing, red, friable, papular, or polypoid lesions of the skin or mucosa that frequently ulcerate and are most commonly seen in children and young adults. The histological pattern of these lesions consists of lobules of small capillaries set in a fibromyxoid matrix, often distinctly exophytic and bounded by hyperplastic epithelium. Although it is believed that PG is a reactional benign lesion formed due to minor trauma and/or chronic low-grade local irritation [5], its etiology is still unclear. Recently, it has been considered to be a reactive hyperproliferative vascular response to a variety of stimuli, rather than a neoplastic or infectious process [6]. Minor traumas or underlying cutaneous diseases could cause an excessive local production of angiogenic growth factors or cytokines, which could be an important factor in the pathogenesis of PG [7]. It has been reported that minor trauma related to zipper accidents, sexual intercourse, and circumcision has played an important role in the etiology of PG of the male genitalia [6]. In our case, we believe that the occurrence of PG in this patient may be due to trauma/ irritation from the marsupialization.

Although PGs are seen in every age group, a higher frequency of PG is observed in the second decade of life [4], with a female predilection of 2 : 1 [8], probably because of the vascular effects of female hormones (high estrogen and progesterone) [5]. However, in a case of cutaneous PG during pregnancy reported by Rumelt et al. [9] estrogen and progesterone receptors were found to be negative. In another study, the distribution of

cutaneous PGs was found to be equal in both sexes, and the researchers concluded that estrogen had no effect on the development of cutaneous PGs [10]. Pyogenic granulomas can be seen in various locations of the body. They are commonly found on the hands, fingers, arms, face, neck and lips [11]. PGs of penis have been rarely reported. Although the diameter of PGs rarely exceed 1 cm they can sometimes grow into very big masses [4]. To our knowledge there are very few if at all any reported case of vagina PG.

Treatment of PGs could either be surgical or nonsurgical. These include surgical excision, curettage/ shave excision, electrodissection, cryotherapy, sclerotherapy, lasers, imiquimod cream, and microembolization. Since spontaneous involution of PG has been rarely reported, it would mostly require one of these treatment options above [12]. One of the main advantages of surgical excision and primary closure is that it is associated with low recurrence rates. Cryotherapy had low recurrence risk among nonsurgical treatment options of PG. There was no statistically significant difference between treatment by surgical excision and cryotherapy when both options were compared [13]. Additional advantages of surgical treatment are single step treatment and pathological evaluation. Pathological confirmation is beneficial for follow-up. Although clinical characteristics and history are very often adequate to distinguish a PG from the other lesions, up to 18% of these lesions are misdiagnosed [14]. Nonsurgical treatment options should be applied for nonsurgical candidates of PG, which are on cosmetically sensitive areas such as face or which are close to vital organs.

IV. Conclusion

We report a case of PG of the vagina treated by surgical excision and primary closure. This case was presented to help gynecologists become aware that lobular capillary hemangiomas may occur at this site.

Disclosure Statement

The authors declare that there is no conflict of interests regarding the publication of this paper.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images.

V. References

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Figure (1): Pyogenic Granuloma on the lower 1/3rd of the right lateral vagina wall.

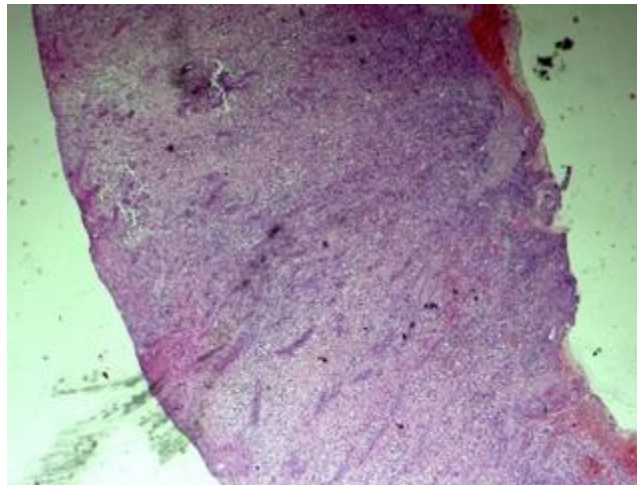


Figure (2): Low power view showing haemorrhage into the stroma and inflammatory infiltrates (x4).

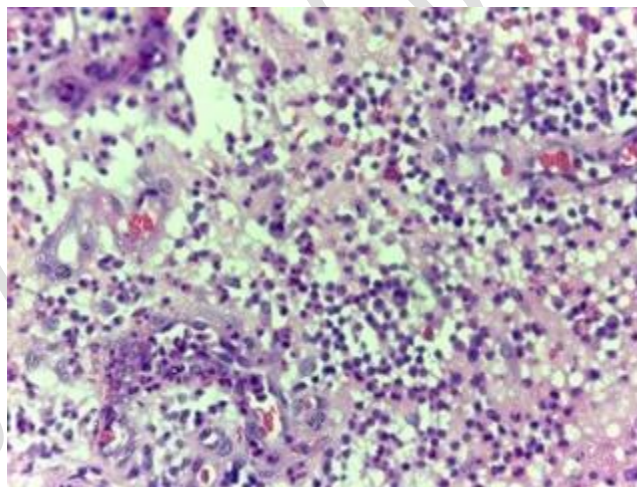


Figure (3): High power view showing oedematous stroma, proliferation of congested blood vessels and inflammatory infiltrates (x40)