CASE REPORT

Septic presentation of a giant fibroepithelial polyp of the vulva

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SUMMARY

Fibroepithelial stromal polyps are mesenchymal lesions occurring typically in reproductive age women with a predilection for the vulvo-vaginal region. Malignancy may mimic this polyp in morphology, rendering further investigations including detailed histopathology mandatory. Histologically its characteristic features are stellate and multinucleate stromal cells identified near the epithelial–stromal interface. This case report discusses incidental finding of largest fibroepithelial polyp presented in a 31-year-old nulliparous woman. She was initially admitted with sepsis and detailed physical examination revealed a right-sided infected pedunculated labial mass measuring 20×21 cm. After initial resuscitation for sepsis, she was further investigated for the mass. Transabdominal ultrasound was essentially normal apart from a small fibroid 3×2 cm in the anterior wall of the uterus. The vulval mass was removed under local and regional anaesthesia and was confirmed to be a giant fibroepithelial stromal polyp on histopathology. The woman recovered well and was followed up until 1 year.

BACKGROUND

This is the largest reported infected fibroepithelial stromal polyp of 20×21 cm. The last reported in previous literature was 20.5 cm by Chan MM *et al.*¹

CASE PRESENTATION

A 31-year-old nulliparous woman presented to the emergency department with the complaint of acute fever. She had a background of polycythaemia, pulmonary hypertension and hypothyroidism. Detailed history revealed a vulval mass which appeared around the age of menarche (14 years). She described it as initially being about the size of a bean and asymptomatic, gradually increasing in size until a year ago when it drastically expanded. She did not seek any medical advice due to social reasons. She used to wrap it around her thigh using a piece of cloth. She denied any sexual activity as well as contraception since her menarche. She had regular menstrual cycles with 30-day cycle intervals and 4 to 6-day cycle lengths with moderate flow. She was a non-smoker and had never used alcohol or drugs. There was no significant surgical history. Her routine medications included sildenafil 50 mg 8 every 8 hours, bosentan 125 mg every 12 hours and iloprost nebuliser every 3 hours.

The gynaecology team was involved following a brief physical examination by the emergency

department physician. Her physical examination was remarkable for signs of sepsis in view of her hypotension 85/54 tachycardia of 135/min and saturations 88% on room air.

Initial assessment revealed a right-sided labial mass measuring 20×21 cm which was non-tender and pedunculated with offensive exudate and pinkish-grey discolouration. Also, right-sided inguinal lymphadenopathy of 4 cm was noted. Since no other source of infection could be found, this fungating vulval polyp was the possible cause of sepsis. The remainder of her genitalia was normal. Broad spectrum antibiotics were started after taking blood cultures and she was moved to a high dependency unit. During this admission, she deteriorated and required resuscitation with norepinephrine (0.05 mcg/kg/min). Although her oxygen saturations improved with her iloprost inhalers initially; however later on, she required non-invasive ventilation.

INVESTIGATIONS

Transabdominal ultrasound was performed after she was stabilised and showed normal anatomy but a thickened endometrium and calcified fibroid in the anterior wall of uterus measuring 3×2 cm. No fluid was seen in the Pouch of Douglas. Her echocardiogram was reassuring with an ejection fraction of more than 55 in view of her sudden desaturation, CT pulmonary angiogram was done to rule out pulmonary embolism.

DIFFERENTIAL DIAGNOSIS

Vulvo-vaginal malignancies.

Figure 1 Fibroepithelial polyp while attached.

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Figure 2 Fibroepithelial polyp while attached (maximum width).

TREATMENT

After initial resuscitation, the mass was removed under local and regional anaesthesia on the third day of her admission. Kelly clamps were put across the base and the mass was excised completely. The pedicle was ligated with 0 Vicryl suture and adequate haemostasis was obtained.

Detailed analysis of the mass showed a pedunculated vulvar mass, arising from the right labia majora with a broad-based stalk measuring 20×21 cm. It was soft and rubbery in consistency, lobulated and had multiple areas of ulceration on the surface (figures 1-5). On cut section, no necrosis or haemorrhage were observed

OUTCOME AND FOLLOW-UP

At the follow-up appointment 1 week later, the vulva was noted to be healing well. The pathology report showed a giant fibroepithelial stromal polyp. The patient was followed up in the gynaecology clinic for continued surveillance and no further complications noted.

DISCUSSION

Fibroepithelial stromal polyps mostly occur in the vagina but rarely also on vulva and cervix of reproductive-age women.²

Figure 3 Fibroepithelial polyp while attached (maximum length).

Figure 4 Fibroepithelial polyp while attached (ulcerated surface).

Being polypoidal and exophytic, they vary in size and have margins which merge with normal tissue and typically have a thick walled vascular supply with a central core.

Figure 5 Fibroepithelial polyp after excision.

Figure 6 A scanner view showing lining by skin with subjacent sparsely cellular, fibrovascular stroma with blood vessels of varying size and wispy collagen.

Figure 7 Shows lining by skin with subjacent stroma, $\times 5$ magnification.

Diagnostic workup of fibroepithelial stromal polyps involves histopathological evaluation along with imaging which helps to delineate the origin and extent of the lesion by evaluation of its blood supply and flow. Among the radiological modalities available, ultrasonography is considered as a first-line imaging tool as it is more cost-effective than CT and MRI and is more accessible.²

Malignancy needs to be excluded in the diagnosis of fibroepithelial stromal polyp.³ Botryoid embryonal rhabdomyosarcoma may be considered as one of the primary differentials, which is typically diagnosed in prepubertal women and lacks the specific hypercellular subepithelial layer and characteristic markers of skeletal muscle differentiation.³ Fibroepithelial stromal polyps may have a similar gross appearance to sarcomas rendering histopathology crucial for distinguishing from other site-specific mesenchymal lesions.⁴ Microscopically, the presence of stellate and multinucleate stromal cells, usually identified near the epithelial–stromal interface is the most characteristic feature of a fibroepithelial stromal polyp.⁵ The stromal cells of the polyp may possess oestrogen and progesterone receptors as well. Sarcomas with homogeneous cellularity, lack of stellate and multinucleate stromal cells near the epithelial–stromal interface

Figure 8 Shows stromal giant cells at the interface of dermis and epidermis.

Figure 9 Follow-up visit after 8 months.

and identifiable lesion margins distinguish them from pseudosarcomatous examples of fibroepithelial polyps.

Microscopic evaluation of the lesion in this case revealed a lesion lined by skin. The subjacent stroma was sparsely cellular (figures 6 and 7) and fibrovascular with lobules of mature adipocytes. Numerous stellate cells mixed with stromal giant cells and wispy collagen fibrils were seen, studded with irregularly arranged blood vessels of different sizes including thin-walled capillaries and muscular arteries. In addition to other areas of skin adnexa stromal giant cells were seen at the interface of dermis and epidermis (figure 8). The epidermis showed extensive areas of inflammation and ulceration with perivascular neutrophilic abscesses, along with evidence of recent and old haemorrhage. Moreover, the epidermis was noticed to be hyperplastic with increased basal pigmentation in some areas. Resected margins showed cauterised skin, fibroadipose tissue and adnexa. There was no evidence of perivascular condensation of collagen or mitosis in the stromal cells and no atypia was seen.

Although rare fibroepithelial polyps can recur especially if they are not excised completely. Such recurrences are reported⁶ and make long-term follow-up and initial appropriate management mandatory. Figure 9 shows the healed surgical site at the follow-up visit after 8 months.

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