Brenner tumour of the vagina

A-M H Rashid, H Fox

Abstract
Polyps of the vagina are rare and are either of inflammatory/reactive or neoplastic origin. A case of extraovarian Brenner tumour of the vagina in a postmenopausal woman, who presented with a vaginal polyp, is described. The polyp was excised and on histological examination, had the triphasic pattern (transitional, glandular and stromal) characteristic of Brenner tumour. The histogenesis of Brenner tumour is discussed in the context of this unusual location and the controversy of its origin.

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Keywords: Brenner tumour, vagina, histogenesis.

The Brenner tumour was first described by Fritz Brenner in 1907, who postulated that it was derived from the granulosa cells of the ovarian follicles. Apart from a few cases presenting outside the ovary, Brenner tumours are almost exclusively ovarian. Here, we report such a tumour arising in a vaginal polyp.

Case report
A 77 year old diabetic white woman presented with a few months history of vaginal irritation and soreness. On pelvic examination, there was a polyp, 2 cm in diameter, arising from the vaginal vault. No bleeding or signs of infection were noted. A simple polypectomy under local anaesthesia was carried out. Past medical history revealed that the patient had had a hysterectomy with bilateral salpingo-oophorectomy for dysfunctional uterine bleeding 20 years before.

PATHOLOGY
The excised specimen consisted of a smooth surfaced polyp measuring 2 × 1.8 cm at maximum diameter. On sectioning, the cut surface was grey-yellow in colour and had small cystic areas. Microscopically, the polyp was covered by a slightly thickened vaginal mucosa. Embedded in the fibrocellular connective tissue core were numerous rounded solid islands and nests of uniform cells showing clear cytoplasm and oval shaped, grooved, nuclei reminiscent of transitional type epithelium (fig 1). Some of these islands had central lumina with a pink acellular secretion, whereas within others, occasional small glandular structures lined by simple columnar cells were noted (fig 2). The triphasic (transitional, glandular and stromal) appearance of this polyp is characteristic of Brenner tumour.

On review of the previous total hysterectomy specimen, there was no evidence of an ovarian Brenner tumour. The patient was followed for 18 months with no recurrence.

Discussion
Neoplasms of the vagina are uncommon. Both benign and malignant tumours are composed of pure or mixed epithelial or stromal elements. Most vaginal polyps are benign tumours of connective tissue origin—for example, fibroma, leiomyoma, nerve sheath tumours, haemangioma, and rhabdomyoma. Of the non-neoplastic polypoid lesions, fibroepithelial and inflammatory granulation polyps are the most common.

Extraovarian Brenner tumours are extremely rare. To date, they have been reported in the

Figure 1 Nest of epithelial cells located within the connective tissue stroma. (Haematoxylin and eosin; original magnification × 200.)

Figure 2 Gland-like structures within the transitional epithelium. (Haematoxylin and eosin; original magnification × 400.)
broad ligament,5-7 the uterus,8 the vagina,9 and the testicular and para-testicular tissues.10-12
For a diagnosis of Brenner tumour, both integral components (the epithelial and mesenchymal stroma) must be present.278

There is only one documented case of extraovarian Brenner tumour of the vagina in the literature.9 A similar case, however, has been reported by Buntine et al10 who called the polyp “benign mixed mullerian tumour of the vagina” and pointed out its resemblance to Brenner tumour. Shevchuk et al,11 in their case of “malignant mixed tumour of the vagina”, were probably describing a malignant Brenner tumour. The authors commented that the ultrastructural findings of their case confirmed urothelial differentiation and that the tumour appeared to arise from mesonephric remnants. It seems that the reason for the confusion in the nomenclature of this neoplasm is because of its bi- or triphasic nature.

The histogenesis of Brenner tumour is still controversial.5-13 The important proposed sites of origin include ovarian surface epithelium5-11; remnants of embryonic coelomic epithelium14-16; displaced mesothelium9,12; rests of Walthard’s cells17,1211; and remnants of mullerian,10-12 mesonephric,17,10,11,13 or wolffian ducts.4,9,10,11,12 Other less likely possible sources are as follows: ovarian stroma2,8,12; rete ovarii2,11,12; rete testis8,12; germ cell (teratomatous) derivation8,11,12; granulosa cells1; ectopic (accessory) ovarian tissue6; ovotesticular12; and ves-tibular glands of the vagina.9

The presence of the tumour in men and at sites far away from the ovary indicates that this neoplasm is not invariably of ovarian origin. The concept of this neoplasm originating from ovarian coelomic epithelium via a process of wolffian differentiation has been supported by serial reconstruction studies, by its coexistence with other ovarian tumours, and by ultrastructural studies.13 Remnants of the wolffian ductal system are known to occur in the broad ligament, cervix and vagina, and must be seriously regarded as an alternative source of the neoplasm in an extraovarian site.7 This theory is supported by fact that the tumour is biphasic and that it resembles the transitional epithelium lining the genitourinary tract.

A Brenner tumour of the vagina could therefore be derived directly from wolffian remnants at this site or could originate from mullerian ductal tissue which forms the upper part of the vagina, by a process of wolffian metaplasia.

P-glycoprotein positive, drug resistant invasive lymphoepithelial thymoma: treatment response to chemotherapy with cyclosporin and quinine

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Abstract
A case of invasive drug resistant thymoma, expressing P-glycoprotein, which showed noticeable clinical response to chemotherapy and the multidrug resistance modulating agents cyclosporin and quinine is reported. A 46 year old man presented with severe left shoulder pain and a diagnosis of invasive lymphoepithelial thymoma was made following chest x-ray and a computed tomography scan. The patient underwent extensive chemo-
therapy without resolution of the tumour. More than 90% of the malignant epithelial cells were strongly positive for P-glycoprotein and based on this observation, cyclosporin and quinine were added to the chemotherapy regimen. The mediastinal mass completely resolved and the size of the pleural metastasis decreased sub-
stantially. The patient, however, died of an intercurrent infection. This case report highlights the feasibility and efficacy of using cyclosporin and quinine in com-

1 Brenner F, Ds ophoroma folliculare. Frank Zechsir Path 1907;1:150-71.
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