Apocrine metaplasia: a new type of Müllerian metaplasia

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Abstract

Apocrine differentiation was an incidental finding in an ovarian cyst. This is considered to be a further example of Müllerian metaplasia that has not been described before and which, theoretically, could occur in any organ of Müllerian derivation (ovary, uterus, cervix or fallopian tube). It is suggested that sites of such metaplasia could in turn be the origin of primary apocrine carcinoma in any of the above locations.

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Case report

A 63 year old woman presented with a two month history of lower abdominal fullness and bloating associated with urinary frequency and hesitancy. Abdominal examination showed a large smooth mass arising from the pelvis. At laparotomy, a right ovarian tumour mass was seen. A total abdominal hysterectomy and bilateral salpingo-oophorectomy was performed. She made a good recovery and was discharged from clinic six weeks after surgery.

Cross examination showed a multiloculated

cyst of the right ovary measuring 16 × 14 × 12 cm. The uterus, cervix, left ovary and the fallopian tubes were unremarkable. Microscopic examination showed a mucinous cystadenoma with foci of struma ovarii in the right ovary. The left ovary showed stromal hyperplasia and clusters of small inclusion cysts. The lining of some of these consisted of large cells with rounded basal nuclei. The cytoplasm was copious, eosinophilic, vacuolated and granular with apical blebs. The granules in the cytoplasm were strongly periodic and Schiff positive (figure). These features were interpreted as those of apocrine metaplasia.¹ There was no evidence of malignancy.

Discussion

Metaplasia of ovarian surface epithelium to a type of Müllerian derivation is well recognised. Five types have been described; tubal (serous); endocervical (mucinous); endometrioid; clear cell; and squamous.^{2,3} The forms of metaplasia are interchangeable between sites and a primary carcinoma can arise from any of them.

Apocrine metaplasia has not been reported before in any Müllerian derived epithelium including the ovary,^{3,4} glandular inclusions in pelvic and abdominal lymph nodes,⁵ or in endosalpingiosis, the histogenesis of which is thought to be from Müllerian metaplasia.⁶

Apical snouting has been described in ovarian metastases of ductal breast carcinoma, but not true apocrine differentiation as described above.⁷

The purpose of this case report is to highlight a further type of Müllerian metaplasia which could occur in any Müllerian derivative. It is important to recognise that the entity itself is benign and should not be mistaken for metastases showing apocrine or oncocytic features. It is suggested that this type of metaplasia may give rise to a primary apocrine carcinoma in Müllerian derivatives which has yet to be described.

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Ovarian inclusion cyst showing apocrine metaplasia with apical blebbing of the cytoplasm (periodic acid Schiff).