Case Report

An ovarian collision tumour in a postmenopausal woman mimicking malignancy

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DOI: http://doi.org/10.4038/jdp.v11i1.7695
Submitted on 01.05.2016 Accepted for publication on 10.06.2016

Introduction

A uterine adnexal mass in a postmenopausal woman is a diagnostic challenge due to a higher risk of malignancy. A definitive diagnosis requires histopathological confirmation.

We report a cystic and solid ovarian tumour in a postmenopausal woman, clinically and radiologically suspected to be malignant, which was diagnosed as a benign collision tumour comprising a serous cystadenoma and a fibroma.

Case report

Clinical history

An eighty-year-old woman presented with abdominal distension of five months duration. Imaging revealed a left ovarian mass with cystic and solid components and ascites. Neither pleural nor pericardial effusion was seen. A malignant neoplasm was suspected and a total hysterectomy with bilateral salpingo-oophorectomy was performed.

Cytology of the ascitic fluid showed reactive mesothelial cells and lymphocytes only; malignant cells were not identified (Figure 1A).

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Pathological features

The specimen comprised a left ovarian tumour (25cm in diameter) with an attached fallopian tube and the uterus with attached right adnexa. The ovarian tumour had a smooth and gray-white surface. Sectioning revealed a unilocular cystic component with a smooth inner surface (15cm in diameter) and a firm, homogenous, white and solid component (14x10x8 cm) (Figure1B). The uterus showed two intramural fibroids and an endometrial polyp. The right ovary and both tubes were unremarkable.

Microscopically the solid area of tumour displayed sheets and fascicles of bland spindle cells with oval uniform nuclei in a collagenous stroma (Figure 1C). Mitosis was absent. Neither a theca component nor entrapped glandular component was identified. A monolayered cuboidal epithelium which lacked atypia lined the cystic part (Figure 1D). The epithelium persisted at the solid and cystic interface, ruling out cystic degeneration of the fibroma. The final diagnosis was a "collision tumour of fibroma with a serous cystadenoma".

The two fibroids were leiomyomata and the endometrial polyp was a benign endometrial polyp.

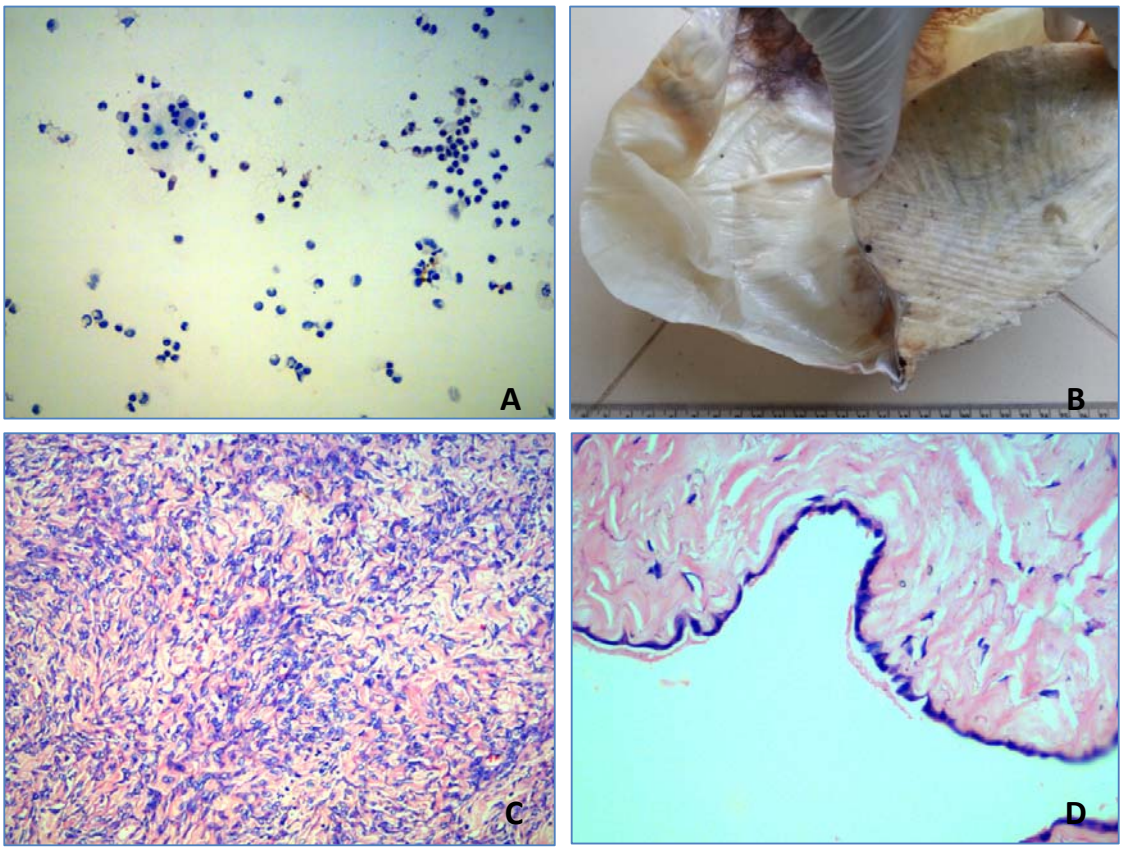

Figure 1. A. Ascites fluid cytology showing reactive mesothelial cells and lymphocytes (Papanicolaou stain x 20). B. Gross appearance of the tumour showing cystic and solid components. C. Solid area comprising bland spindle cells (Haematoxylin and Eosin x 20). D. Cystic area showing a simple cuboidal lining (Haematoxylin and Eosin x 40).

Discussion

Collision tumours are rare neoplasms characterized by histologically different tumours developing in close proximity in an organ from two divergent lineages. Though such tumours have been reported often in various organs, their occurrence in the ovary is rare (1).

Surface epithelial tumours are the commonest tumour group in the ovary accounting for 60% of all ovarian tumours. The peak incidence of serous cystadenoma is at the 4^{th} to 5^{th} decades of life. Relatively indolent serous carcinomas can arise from pre-existing cystadenomas (2).

Sex cord stromal tumours are less common and most frequently seen in middle-aged women (3). Although ovarian fibromas are not reported to progress to fibrosarcoma, large size (>10 cm), rapid growth, high mitoses (10/10HPF) and high Ki-67 proliferative index denotes malignant potential (4).

A serous cystadenoma – fibroma combination is very rarely encountered. Commonly encountered combinations are mucinous cystadenoma with Brenner tumour, mature cystic teratoma and Sertoli-Leydig cell tumour (5).

This patient had an ovarian tumour with cystic and solid components. Cystic component showed a serous lining and the

solid component showed features of a fibroma. The main differential diagnoses were serous cystadenofibroma, cystic change in a fibroma, and collision tumour of serous cystadenoma with a fibroma, fibrothecoma or a Brenner tumour. Serous cystadenofibroma has variably sized cystic spaces embedded in a markedly fibrous stroma and broad papillary projections which were not evident in our case grossly or histologically. Degenerative cystic change can occur in a fibroma in which a lining epithelium is absent (5). In this case, a continuous cuboidal epithelium lined the cyst including the interface between solid and cystic parts excluding cystic degeneration. The fibrous component of the Brenner tumour may overgrow the epithelial component, which makes the epithelial component undetectable if inadequately sampled and rarely is known to associate with serous tumours. A thecoma component may associate with fibroma (6). Extensive sampling excluded Brenner tumour and a thecal component.

In 1937, Meigs and Cass described seven cases of combined pleural effusion, ascites, and ovarian fibroma and subsequently this syndrome was named as Meigs syndrome. This syndrome appears in approximately 1% of ovarian fibromas. In the present case only ascites was present. Pseudo-Meigs is a variant consisting of pleural effusion, ascites and benign tumour of the ovary other than fibromas (1,3). Elevated CA 125 is seen in Meigs syndrome and Pseudo- Meigs syndrome (1). Although CA125 was not performed in this patient, a similar clinical scenario with a high CA 125 level can be highly suspicious of a malignant ovarian tumour clinically.

We report this case of an unusual collision tumour of the ovary in a post menopausal woman for the awareness among the pathologists and gynaecologists about the occurrence of this rare combination of benign ovarian tumours which may appear malignant clinically and on imaging due to the presence of solid and cystic components, an association with ascites and elevated CA 125 levels. As both components are benign, excision is curative.

References

1. Chandanwale SS, Pal SS, Kumar HB, Sammi AB. Serous cystadenoma and fibrothecoma. A rare combination in collision tumour of ovary with pseudo-Meigs syndrome. Journal of Pathology and Translational Medicine 2015; 49: 163-166.
2. Agah J, Esfehani R J, Kamalimanesh B, Abdizadeh M F. Mismanagement of a huge ovarian serous cystadenoma in a young girl; a case report. Journal of midwifery and reproductive health 2015; 3: 315-317.
3. Chechia A, Attia L, Temime RB, Makhlouf T, Kou-baa A. Incidence, clinical analysis, and management of ovarian fibromas and fibrothecomas. American Journal of Obstetrics and Gynecology 2008; 199: 473.
4. Zong L, Lin M, Fan X. Mitotically active cellular fibroma of ovary should be differentiated from fibrosarcoma: a case report and review of literature. International journal of clinical and experimental pathology 2014; 7: 7578-7582.
5. Jayalakshmy PS, Poothiode U, Krishna G, Jayalakshmy PL. Ovarian Fibroma with Serous Cystadenoma—An Unusual Combination: A Case Report. Case report in obstetrics and gynecology 2012; 2012:641085.
6. Ahmed E, Sah SP, Adikesayalu A, Madhavan K. Unusual collision tumour of ovary: Endometrioid adenocarcinoma and teratoma. Clinical ovarian and other gynaecologic cancer 2012; 5: 33-36.