Metastatic ovarian squamous cell carcinoma

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ABSTRACT

Ovarian squamous cell carcinoma is usually associated with germ cell tumours (dermoid cyst) or endometriosis in primary cancer. While tumour metastasis to the ovary is common and often bilateral in over 50 percent of cases, metastatic cervical squamous cell carcinoma to the ovary is infrequent compared to adenocarcinoma from other extraovarian primaries and the cervix. We report two cases of unilateral metastatic ovarian squamous cell carcinoma from the uterine cervix in two women aged 38 years and 48 years, respectively. They presented with abdominopelvic masses, clinically thought to be tuberculosis and primary ovarian tumour, respectively. Both had laparotomy which revealed multinodular ovarian masses with extensive extra-ovarian involvement of the corpus and uterine cervix by tumour and omental seedlings. Tissue microscopy showed total replacement of ovarian stroma by tumour with necrotic foci and containing infiltrating nests and cords of malignant squamous cells with prominent intercellular bridges. No evidence of teratoma or endometriosis was seen in the histology sections. They were both diagnosed with metastatic ovarian squamous cell carcinoma with advanced stage disease primary in the uterine cervix. Ovarian metastatic squamous cell carcinoma from the uterine cervix may occur with advanced stage cervical carcinoma. Unilateral multinodular ovarian mass with extensive extra-ovarian tumour involvement should raise suspicion of metastasis rather than of primary tumour. Early and prompt diagnosis is desirable in the management of these patients.

Keywords: ovarian metastasis, squamous cell carcinoma, uterine cervix, uterus

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INTRODUCTION

The ovary is the commonest pelvic genital organ involved in tumour metastasis.[1-3] These metastatic tumours are either derived from mullerian (uterus, fallopian tube, and pelvic peritoneum) or extra-mullerian (breast, gastrointestinal, pancreas and biliary tract) origins.[3] They often mimic primary ovarian tumours because of the similarity of clinical presentation and microscopical features.[4] Primary ovarian tumours arise from the invaginated portion of the surface epithelium and account for a large number of female genital cancer-related deaths. However, primary ovarian squamous cell carcinoma (SCC) is associated with germ cell tumours (dermoid cyst/teratoma) or endometriosis.[4-6]

Cervical SCC metastasising to the ovary is rare.[2] Ovarian metastasis occurs in about 39% women dying from cancer, and accounts for 6%–7% of all incidental

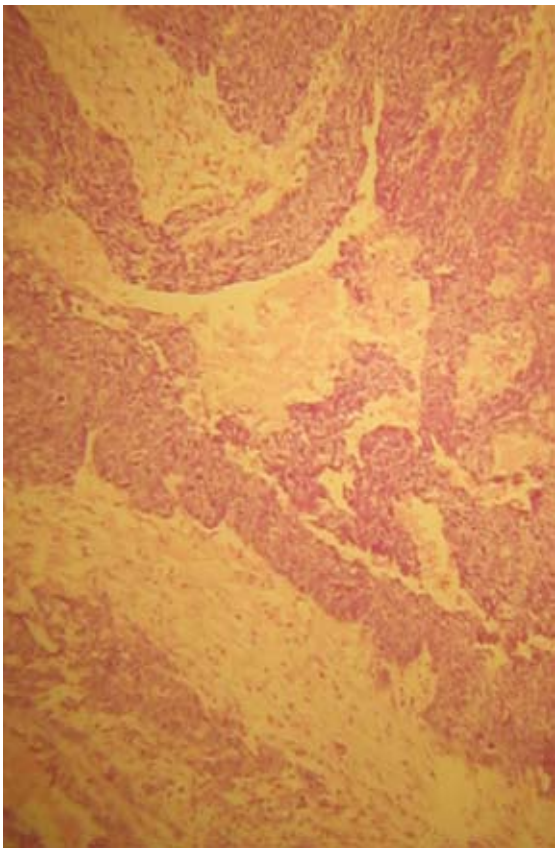

Fig. 1 Photomicrograh shows strands of malignant squamous cells within ovarian stroma (Haematoxylin & eosin, x 100).

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adnexal masses.[1,6] Krukenberg in 1896 first described the pathological classic bilateral ovarian metastatic mucin producing signet ring adenocarcinoma from the stomach,[7] though it was Schlagenhaufer in 1902 who established the epithelial origin of metastatic tumours to the ovary.[8] A total of 153 cervical SCC were seen in the department of pathology from January 2001 to December 2005. We report two cases of unilateral metastatic ovarian SCC from the uterine cervix.

CASE REPORTS

Case 1

A 48-year-old woman presented with pelvic pain of six months' duration. Clinical and laboratory examinations revealed cervical cancer and a left-sided ovarian mass. The ovarian mass was thought to be a primary tumour. Surgery revealed a huge multinodular ovarian mass with extra-ovarian involvement and omental seedlings. She had a left-sided oophorectomy and omental biopsy. Grossly, a huge globular mass measuring 15 cm × 11 cm and weighing 1,005 g was received in our department. The outer surface of the mass showed multiple grey-white nodules of varying sizes, while the cut surface showed solid grey and necrotic areas and a unilocular cyst containing 10 ml of serosanguineous fluid. Histology showed a necrotic infiltrating tumour in nests and cords composed of malignant squamous cells within the ovarian stroma (Fig 1). Omental seedlings show similar malignant squamous cells.

Case 2

A 38-year-old woman presented with a four-month history of lower abdominal pain. A left loin mass was discovered on examination. Investigations revealed a left tubulo-ovarian mass which was considered granulomatous, likely to be tuberculosis. At laparotomy, the granulomatous mass involved the left fallopian tube and ovary, corpus uteri and sigmoid colon. She had an oophorectomy. A tissue specimen measuring 6.5 cm × 5 cm and weighing 12 g was sent for histology. Cut surface showed grey and necrotic areas. Histology showed infiltrating nests and strands of moderately differentiated SCC with focal necrosis within the ovarian stroma. Like Case 1, this patient was diagnosed to have metastatic SCC with the primary tumour in the uterine cervix.

DISCUSSION

Ovarian malignancy accounts for 6% of female cancers and commonly affects older women.[1,4] It accounted for 8.9% of female genital tumours in Zaria, Nigeria.[9] Comparable studies from other centres reported higher percentages.[10,11] It is the fifth leading cause of cancer death in women worldwide. Cervical SCC remains a leading cause of female cancer-related death in developing countries.[3,12] It is the commonest malignancy among women in Zaria, Nigeria, and accounts for 15.5% of all malignancies seen in the department within the study period. Patients often present with advanced stages of the disease.[13,14] Out of 153 SCCs, only two cases showed ovarian metastasis and both had advanced stage cervical cancer. Recent studies reported a significantly lower incidence of ovarian metastasis of cervical SCC, compared to adenocarcinoma from the same site.[15-17]

The majority of metastatic ovarian tumours arise from primaries in the stomach, colon, breast, pancreas, biliary tract, appendix and lung.[1,18-21] The incidence of metastasis from the breast and colorectum is the highest.[6] It is noteworthy that the frequencies of the primary site is variable and dependent on the cancer incidence in the different localities.[6] Quite often, metastasis may be the initial manifestation of the primary tumour.[22,23] Ovarian metastatic tumours may present a diagnostic difficulty clinically and even microscopically, because they often mimic primary tumours due to similarity of nonspecific clinical symptoms (abdominopelvic masses, pelvic pain, vaginal bleeding and ascites).[24-26] Also, the histological appearance depends on the primary tumour. However, ovarian metastasis is characterised by bilaterality, macroscopic surface nodules, extensive extra-ovarian spread and unusual dissemination and microscopical features. Both patients in this study, presented with unilateral masses detected on physical examination.

A comprehensive medical history, thorough physical examination, imaging studies, correct interpretation of intraoperative findings and tissue histology showing vascular tumour invasion is significant in the diagnosis of metastatic tumours. Ovarian metastatic SCC from the uterine cervix may occur with advanced stage cervical cancer. Unilateral multinodular ovarian mass with extensive extra-ovarian tumour involvement should raise suspicion of metastatic tumour. Early and prompt diagnosis is desirable in the management of these patients.

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