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CASE REPORT

Primary Endometrioid Carcinoma of the Broad Ligament: A Rare Case Report

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Introduction

Although secondary involvement of the broad ligament by malignant tumours arising elsewhere in the abdomen is common, primary tumours in this location are rare. Most neoplasms in this region whether benign or malignant usually present clinically with vague symptoms and are often discovered either during a routine gynaecological examination or on abdominal exploration because of the presence of a pelvic mass and vague lower abdominal discomfort or pain [1].

The present case which was diagnosed clinically as left ovarian tumour and histopathologically as endometrioid carcinoma of the broad ligament is reported for its rarity and for the unique histological finding of transitional cell differentiation associated with the primary tumour.

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Case Report

A 37-year-old woman, gravida two, para two was admitted because of progressive lower abdominal pain and heaviness for the last 3 months. Her previous surgical, gynaecological and obstetrical history was unremarkable. Her general physical examination was normal with stable vitals. On per-abdomen examination, a large irregular, firm, non-tender mass was palpated in the hypogastrium. On per-vaginal examination, the mass was felt in the left adnexal region reaching just short of left lateral pelvic wall. Uterus was normal in size, separately felt from the mass and was deviated to right side. A provisional diagnosis of left ovarian tumour was made. Ultrasonography (USG) of the pelvis revealed a left ovarian tumour with ascites. Computed tomography (CT) scan of the pelvis showed a tumour in the left adnexal region along with ascites and multiple pelvic lymph nodes. Complete haemogram, renal function tests and liver function tests were within normal limits.

Biochemical findings showed elevated CA-125 levels to 662 IU/ml.

USG-guided fine needle aspiration cytology (FNAC) from the mass was done, and a possibility of an adenocarcinoma was suggested (Fig. 1).

Ascitic fluid cytology was negative for tumour cells.

Subsequently, the patient underwent exploratory laparotomy. About 2.5 l of light-brown-coloured ascitic fluid was drained. Operative findings revealed a mass in the left broad ligament, which was separate from the fallopian tubes, ovaries and urinary bladder but was attached to the

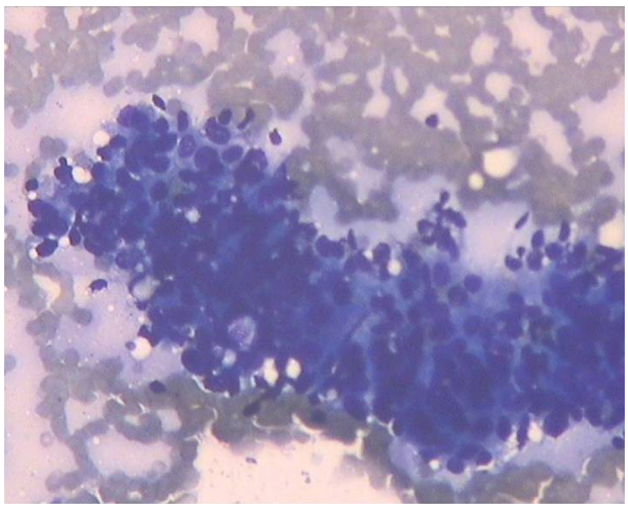

Fig. 1 Smear showing papillary arrangement of tumour cells with microacini formation (Giemsa, ×400)

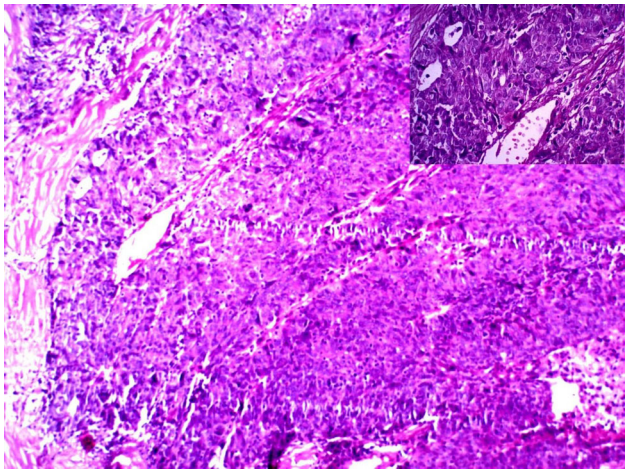

Fig. 3 Photomicrograph showing predominantly endometrioid foci with areas of transitional cell differentiation (H and E, ×100). *Inset* glands with papilla lined by transitional cells (H and E, ×400)

serosal aspect of the cervix. Tumour implants were noted in the omentum. A total abdominal hysterectomy with bilateral salpingo-oophorectomy, removal of the broad ligament tumour, partial omentectomy and pelvic lymphadenectomy were performed. The specimen was subjected to histopathological examination.

Histopathological Findings

On gross examination, the specimen consisted of utero-cervix, bilateral fallopian tubes and ovaries with a solid mass in the left broad ligament. The left broad ligament mass measured 13 × 8 × 5 cm and was grey–white on sectioning along with areas of necrosis and haemorrhage. There was no involvement of the left fallopian tube or ovary but the mass was attached to the serosal surface of the cervix. Both the fallopian tubes and the ovaries were normal in size and appearance (Fig. 2). Omentum showed three tumour nodules. Six pelvic lymph nodes received were submitted for microscopic examination.

Microscopy revealed histopathological features of endometrioid carcinoma of the broad ligament with foci of transitional cell differentiation (Fig. 3), serosal surface involvement of cervix and metastatic tumour deposits in the omentum and two pelvic lymph nodes. Sections from the uterus, bilateral fallopian tubes and ovaries were free from tumour invasion. No endometriosis was recognized in any section despite extensive sampling.

The post-operative period was uneventful. The patient received adjuvant chemotherapy and was free of disease 3 months post-operatively.

Fig. 2 Gross photograph showing a solid mass in the left broad ligament along with utero-cervix and normal looking ovaries

Discussion

Primary broad ligament carcinomas unassociated with either uterine or ovarian involvement as in the present case are rare [2]. The primary endometrioid carcinoma of the broad ligament described in this article was histologically indistinguishable from primary ovarian or uterine endometrioid carcinoma and fulfilled the criteria for primary cancer of the broad ligament proposed by Gardner et al. [3], namely, a primary location within or on the surface of the broad ligament and complete separation of the tumour both from the uterus and the ipsilateral ovary and fallopian tube. Hence, the present case was labelled as primary endometrioid carcinoma of the broad ligament.

The other significant histologic finding included foci of transitional cell differentiation with no uterine or ovarian

involvement. To rule out the possibility of a primary transitional cell carcinoma (TCC) of the urinary bladder, biopsy from the bladder was taken later on, which showed no such evidence on histopathological examination.

CA-125 is most consistently elevated in epithelial ovarian cancer, but can be expressed in a number of gynaecological (endometrial, fallopian tube) and non-gynaecological (pancreatic, breast, colon and lung) cancers, as well as in a number of benign conditions, including endometriosis [4]. Separate studies conducted by Brown et al. [5] and Itani et al. [6] showed elevated CA-125 levels in case of broad ligament leiomyoma and malignant epithelial tumour of unknown origin of the broad ligament, respectively. In these studies, both the ovaries were unremarkable. In our study, too, CA-125 levels were raised.

To conclude, primary broad ligament endometrioid carcinomas are rare tumours and may pose a diagnostic challenge to clinicians as well as pathologists when they are unassociated with ovarian, uterine or bladder involvement, more so when they are associated with a unique feature like transitional cell differentiation as in the present case.

Conflict of interest None declared.

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