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Case Report

Primary Tubal Serous Cystadenocarcinoma: A Rare Gynaecological Malignancy

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Abstract

Introduction: Carcinoma of the fallopian tube is a rare pelvic malignancy accounting for only 0.3 to 1.1% of all gynaecological cancers with less than 1500 cases reported in the literature [1,2]. Primary fallopian tube carcinoma isprovisionally misdiagnosed as ovarian carcinoma due to its rarity and symptom overlap.

Case Report: We present the case of a 55 years old female whopresented with complaints of an abdominal mass. After imaging and examination,she was clinically diagnosed as a left adnexal mass most probably of ovarian origin. During diagnostic laparotomy, an adnexal mass with hemoperitoneum was noted. Total abdominal hysterectomy with bilateral salpingo-oophorectomywith lymph node dissection was done and sent for histopathological examination. On gross examination, both the ovaries were uninvolved and tumour masseswere seen in both fallopian tubes, larger in the left tube.After extensive sampling and microscopic examination, a histological diagnosis of papillary serous cystadenocarcinoma of the fallopian tube was given.

Conclusion: In conclusion, a case of primary fallopian tube carcinoma, although rare should be taken as a possibility for any adnexal mass. Early clinical suspicion followed by prompt investigations will lead to early diagnosis and a better survival.

Keywords: Primary; Fallopian Tube Malignancy; Papillary Cystadenocarcinoma.

Introduction

Primary fallopian tube carcinoma is an uncommon disease accounting for less than 2% of gynaecological malignancies [3]. Although rare, it is an aggressive tumour. Loco regionally advanced disease is difficult to differentiate from similar stage ovarian and primary peritoneal carcinomas [2]. Nulliparous women are at a higher risk for developing primary fallopian tube carcinoma [4]. A correct diagnosis is rarely achieved preoperatively and it is often misdiagnosed as an adnexal mass preferentially of ovarian origin.Comparedwith ovarian carcinoma, it more often presents at early stages, but has a worse prognosis with poor survival [5]. This tumour is usually managed in the same manneras ovarian cancer [5]. We report a case of primary fallopian tube serous cystadenocarcinoma in a patient who presented with an adnexal mass.

Case Report

A 55 years old, postmenopausal female, presented with the complaints of pain abdomen for 15 days. She was a known case of type 2 diabetes mellitus on dietary management and had undergone tubal ligation 10 years back. An ultrasound scan was done which showed a left adnexal mass with hemoperitoneum. During explorative laparotomy, a highly adherent, vascular and friable

mass was found in the pouch of Douglas. A representative bit from the mass was sent for frozen section and was reported as serous papillary carcinoma. Patient underwent total abdominal hysterectomy with bilateral salpingo-opherectomy with pelvic and para aortic lymph node dissection and omentectomy. The specimen was sent for histopathology where on gross and microscopic examination, the uterus, cervix and bilateral ovaries appeared unremarkable. However, left fallopian tube was enlarged, the lumen was dilated and obliterated by a 6x4x4 cm, grey white mass, the cut surface of which showed areas of hemorrhage and necrosis. The lumen of right fallopian tube also was filled with tumour. Microscopy of both the fallopian tubes showed tumour arising from the fallopian tube epithelium and arranged in complex papillae and cribriform pattern. Individual tumour cells had hyperchromatic nuclei and moderate eosinophilic cytoplasm. Numerous mitotic figures were seen. Tumour was infiltrating the sub epithelium and filling up the entire lumen. Adjacent lining epithelium focally showed carcinoma in situ and dysplastic features. Serosa and omentum showed tumour deposits.

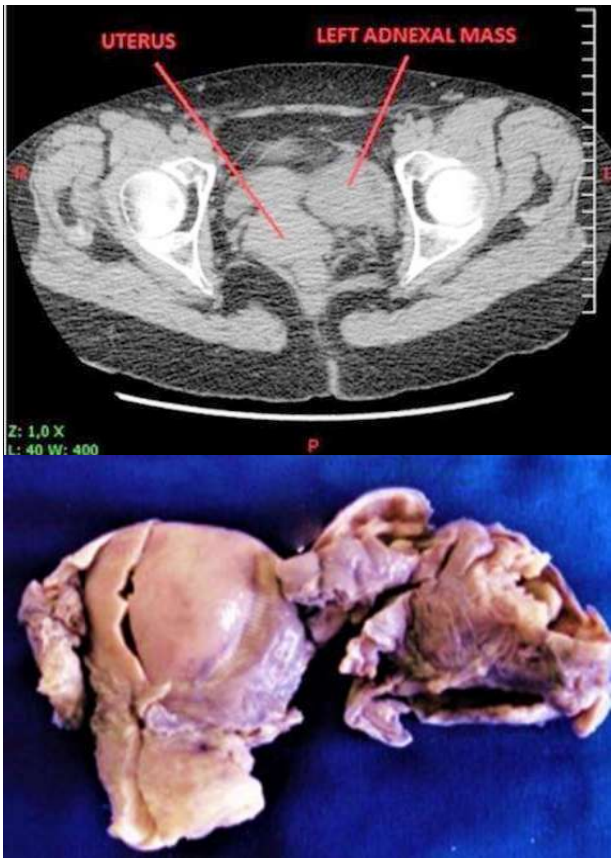

Fig. 1 A: CT scan showed a large left adnexal mass.
B. On gross examination, uterus, cervix and ovaries appeared unremarkable. A large lefttubal mass was noted. The tumour cut surface was grey white with areas of haemorrhage and necrosis. (Extensive sampling done).

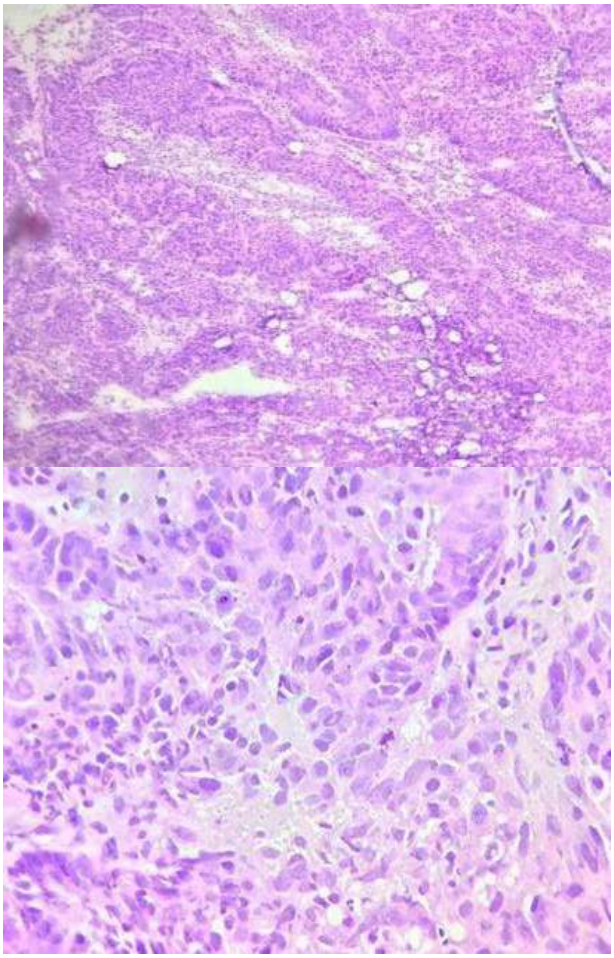

Fig. 2A: Frozen Section: low power view (10X) showing papillary architecture of tumour. **B.** Frozen Section: high power view (40X) showing papillae with central fibrovascular core and lined by pleomorphic cells.

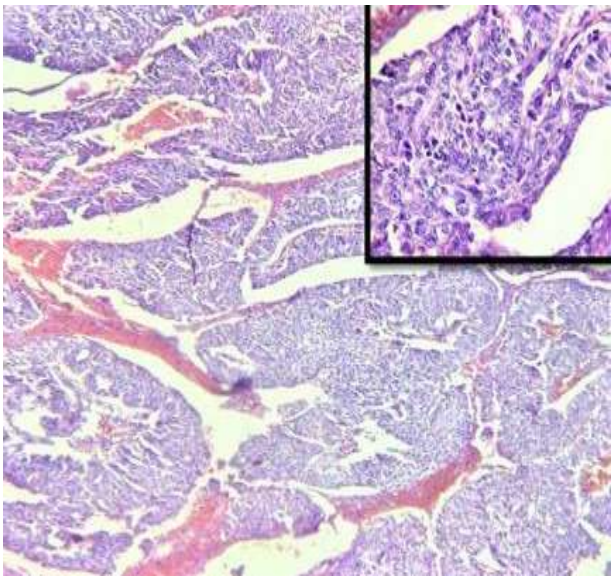

Fig. 3: Paraffin section - shows complex papillary arrangement of the tumour (10X). Inset shows pleomorphic tumour cells lining the papillae (40X).

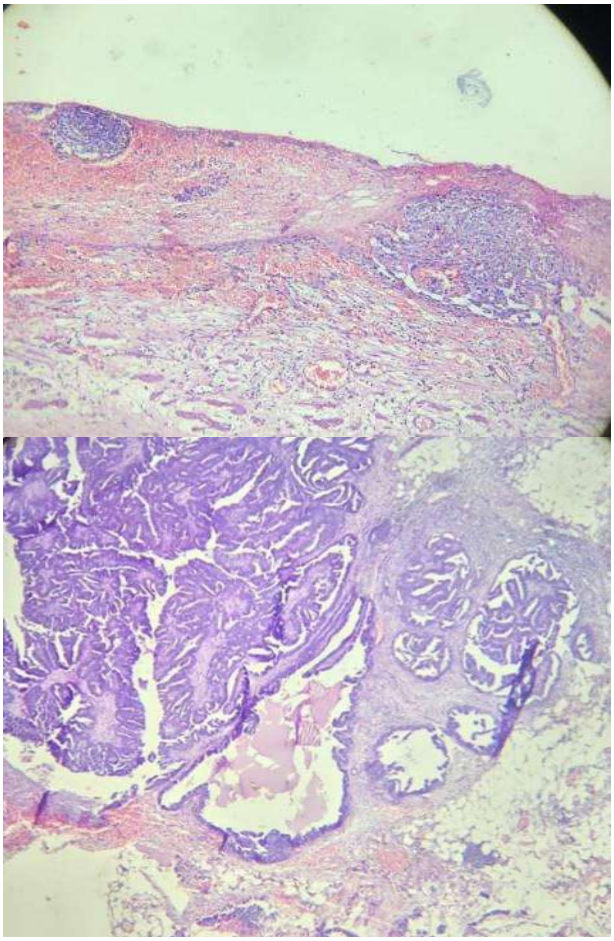

Fig. 4A: Metastases: Tumour nodules in the serosa. **B.** Metastases: Large tumour deposit in the omentum.

Final impression of High Grade Papillary Serous Cystadenocarcinoma Of bilateral Fallopian Tubes with a TNM staging of pT3b N0 Mx was given.

Discussion

Primary fallopian tube carcinoma was first described by Reynaud in 1847 and the first microscopic description was recorded by Rokitansky in 1861. The first classic case was reported by Orthmann in 1886 [4]. It is extremely rare. Although the exact etiopathogenesis remains elusive, it is suggested to be associated with chronic tubal inflammation, infertility, tuberculous salpingitis, tubal endometriosis, nulliparity and hormonal factors. High parity is considered to be protective [6]. The 5 – year survival rates are higher for stage I disease (68-76%)as compared to stages III and IV (0-6%), therefore making it important to diagnose these neoplasms in early stages [1]. There is a robust evidence for specific genetic mutations such as BRCA 1 and BRCA 2 for conferring increased susceptibility. The mean age of incidence being 55 years (17-88 years). The most prevailing symptoms with fallopian tube carcinoma are abnormal vaginal bleeding (47.5%), abdominal or pelvic pain (39%), abnormal watery vaginal discharge or 'Hydrops tubae profulens' (20%), symptoms of pressure and most commonly a palpable complex adnexal mass (61%) [1-7]. Due to its rarity and symptom overlap, preoperative diagnosis of primary fallopian tube carcinomas is rarely made and is usually misdiagnosed as an ovarian carcinoma, tubo – ovarian abscess or ectopic pregnancy. USG and CT scan show non – specific features including presence of a fluid filled adnexal mass with solid or cystic components. Preoperative diagnosis could be assisted by measurement of serum levels of CA 125 and can be used in the diagnosis and follow-up surveillance for detection of recurrence. Positive pap smears have been reported in only 0% - 23% of cases [6]. The close proximity of the fallopian tubes to the ovaries and the uterus sometimes makes it difficult to identify a true primary. The diagnosis of PFTC should be considered in presence of one of the diagnostic criteria [6]: i) The main tumour is in the tube and arises from the endosalpinx. ii) Histologically the pattern reproduces the epithelium of the mucosa and often shows a papillary pattern. iii) If the wall is involved, the transition between benign and malignant epithelium should be demonstrable. iv) The ovaries and endometrium are either normal or contain less tumour than the tube. Various histological subtypes include serous, endometroid, transitional cell, undifferentiated, clear cell and mixed [10]. The most common histological type of PFTC is the serous adenocarcinoma. Grossly, the tube is enlarged and has fibrous adhesions. Microscopically high grade papillary carcinoma shows branching papillary fronds, slit- like fenestrations, glandular complexity, moderate to marked nuclear atypia with marked pleomorphism, prominent nucleoli, stratification, frequent mitosis and stromal invasion. The stroma may be fibrous, oedematous, myxoid or desmoplastic with psammoma bodies. The pattern of metastatic tumour spread is similar to ovarian cancers principally by the transcoelomic (80%), local invasion, transmural migration and via the lymphatics and the blood stream. Bilateral tubal involvement has been reported in 10%-27% of cases.

Fallopian tube carcinoma is surgico-pathologically staged according to the TNM or FIGO staging and is managed by cytoreductive surgery to remove the primary tumour along withtotal abdominal hysterectomy, bilateral salpingo-oophorectomy and pelvic lymph node resectionfollowed by adjuvant chemotherapy. The current chemotherapy of choice consists of 3-6 cycles of platinum-taxane combination. Median progression free survival at 3 years has been reported to be67% for patients who underwent surgery followed by chemotherapy [8].

Patients with PFTC have a higher rate of retroperitoneal anddistant metastases than those patients with epithelial ovarian cancer [9]. Metastases to the para-aortic lymph nodes have beendocumented in 33% of the patients with all stages of disease. Thestage of disease at the time of diagnosis is the most important factoraffecting the prognosis, and the 5-year survival rate for all thepatients with fallopian tube carcinoma has been reported to rangefrom 30% to 50%. The other clinicopathologic prognosticfactors include residual disease after cytoreduction, the presence ofascites and the histologic grade.

Conclusion

Primary papillary serous cystadenocarcinoma of fallopian tube is often silent and a challenging entity for both clinicians and pathologists as similar morphology can be encountered in ovarian primaries. IHC and radiology are not of much help, however a meticulous gross examination and extensive sampling especially of the fimbrial end is vital. PFTC should be taken into account for making the differential diagnosis of a suspicious adnexal mass or a presumptive tubo- ovarian abscess in all post menopausal women and also in pre- menopausal women who fail to respond to antibiotic therapy and drainage. Prognosis in these cases is worse as the patients present with metastatic disease.

Conflict of Interest: NIL

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