Primary Serous Papillary Adenocarcinoma Fallopian Tube: A Rare Case Report

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ABSTRACT

Introduction: Primary fallopian tube carcinoma is a rare tumour accounting to almost 0.1-1.8% of all genital malignancies and difficult to diagnose preoperatively, because of its non-specific presentation as well as simulation with ovarian carcinoma. It is usually an intraoperative finding or a histopathological diagnosis.

Case Report:The study present a case of 48 yr old post menopausal women who underwent abdominal hysterectomy with unilateral salpingo-oopherectomy for hydrosalpinx and ovarian cyst. Histopathological examination revealed, primary serous papillary adenocarcinom of fallopian tube.

Conclusion: Primary tubal cancer is rare, mostly mistaken for ovarian carcinoma. Histopathological examination is the gold standard for final diagnosis.

Keywords: Fallopian Tube, PFTC, Ovarian Carcinoma

INTRODUCTION

Primary fallopian tube carcinoma (PFTC) is a rare gynecologic malignant tumor accounting for approximately 0.14-1.8% of female genital malignancies.[1-3] It was first described by Reynaud in 1847 and since then over 2000 case have been reported in literature.

Patients have a wide age range (25-95 years), but majority are post-menopausal with a mean age of 60 years. Histological, molecular and genetic evidence shows that 40-60% of tumors that were classified as high-grade serous carcinomas of the ovary may have originated in the fimbrial end of the fallopian tube. Therefore its incidence may have been underestimated.[4] In comparison to ovarian carcinoma, PFTC often presents at early stages, but has a worse prognosis. The etiology of this tumour is unknown, but it is suggested to be associated with chronic tubal inflammation, infertility, tuberculous salpingitis and tubal endometriosis.[5] Primary serous adenocarcinoma with papillary features is the most common histological type(>90%). Similar to ovarian malignancy, a BRCA germline mutation and TP53 mutation are associated with PFTC.[6,7]

Clinical symptoms and signs are non-specific. The rate of preoperative diagnosis is in the range of 0%-10% and in most cases it is an intraoperative finding or a histopathological diagnosis. We are reporting a rare case of fallopian tube carcinoma in a 48-year-old female, with review of the literature.

CASE REPORT

A 48 year old postmenopausal woman, presented with complaint of lower abdomen pain since 3 months. There was no history of bleeding per vagina, weight loss, or any significant family history. Clinical examination revealed a vague tender adnexal mass which was diagnosed as hyadrosalpinx and adnexal haemorrhagic cyst of size 6X5cm with pelvic inflammatory disease on pelvic ultrasonography. Liquid based cytology was done which suggested bactrerial vaginosis only. An exploratory laprotomy was carried out and adnexal mass along with uterus and cervix were removed. Gross examination (fig-1) showed a solid tubular mass measuring 9X4 cm with ovary attached at one of its end. On cutting this mass, complete lumen of tube was filled with grey white solid mass. The ovary was seen lying free from the mass. Uterus along with cervix were free of any gross lesions.

Microscopic examination (fig-2) from tubular mass showed tumour cells arranged in papillary structures, sheets and glands. The cells showing marked pleomorphism, eosinophilic to clear cytoplasm, hyperchromatic nuclei and prominent nucleoli. Mitotic figures, areas of haemorrhage, necrosis also seen. Along with this foci of tubal papillary hyperplasia also noticed (fig-1).

Sections from endometrium showed proliferative endometrium. Ovary showed follicular cyst only with no evidence of tumour tissue.

DISCUSSION

PFTC is a rare gynecologic malignant tumor, with mean age of incidence being 55 years (age range 17-88 years). Usually, it is unilateral, with bilaterality seen in only 2-13% of cases.There are no known predisposing factors, but it has been found to be associated with nulliparity, infertility and pelvic inflammatory disease. High parity, oral contraceptive users and pregnancy has been reported to be protective. Our patient was postmenopausal having pelvic inflammatory

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How to cite this article: Permeet Kaur Bagga, Neha Saini, Surinder Paul, Kanika Wadhwa. Primary serous papillary adenocarcinoma fallopian tube: a rare case report. International Journal of Contemporary Medical Research 2019;6(6):F50-F52.

DOI: http://dx.doi.org/10.21276/ijcmr.2019.6.6.53

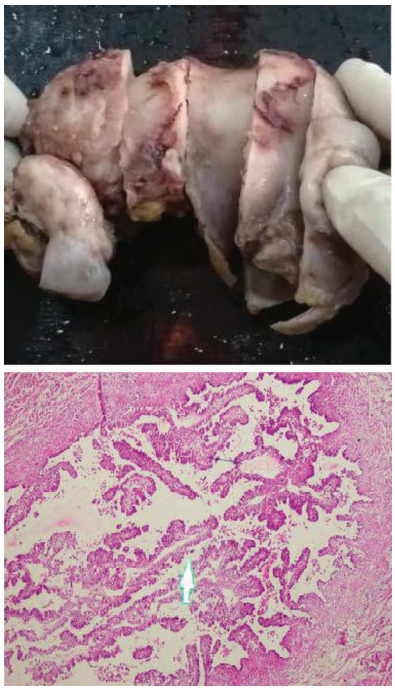

Figure-1: gross specimen showing tubular mass with ovary attached in the left; H & E section (10X10) showing tubular papillary hyperplasia

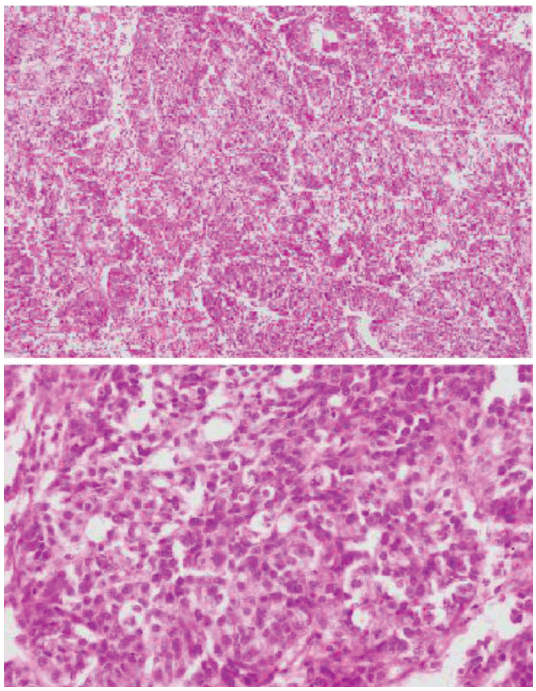

Figure-2: H & E section (10X10) showing tumour cells arranged in papillary, glandular pattern and in sheets; H & E section (40X10) showing tumour cells

disease which was diagnosed radiologically.

Due to its rarity, correct preoperative diagnosis is rarely made and it is usually misdiagnosed as ovarian carcinoma. In the series of Alvarado-Cabrero et al only 4.6% of cases were correctly dignosed as PFTC preoperatively.[8] Epithelial ovarian carcinoma is often diagnosed at an advanced stage, but PFTC is found in an early stage, because of abdominal pain from tubal distension.

The clinical symptoms and signs are not specific with most common symptom being abdominal pain, which may be colicky as a result of forced tubal peristalsis or dull as a result of tubal distension.[9] The Latzko's triad of typical symptoms consists of intermittent serosanguinous vaginal bleeding, colicky pain relieved by discharge and an abdominal or pelvic mass. This triad was reported in only 15% of PFTC cases. Pap smear positivity occurs in 10%-36% of cases.[10] In our case, abdominal pain was present since 3 months and Pap smear were negative.

Diagnostic criteria for PFTC was first established by Hu et al in 1950 and later modified by Sedlis in 1978.[1] It includes that the tumour should arise from the endosalpinx, histologically reproduce the epithelium of fallopian tube mucosa with transition from benign to malignant epithelium. The ovaries should be either normal or with smaller tumour than the tube[1] All these criteria were fulfilled by the tumour detected in our case and hence a diagnosis of primary fallopian tube carcinoma was made.

Serous carcinoma is the most common histologic subtype having papillary, solid, glandular or micropapillary architecture. High grade forms are characterized by highly atypical nuclei (multinucleated cells), with a mitotic index over 12 /10 HPF. In one series of 151 cases, 80% of the tumours were serous.[8] The second histological type is endometrioid carcinoma, accounting for 12-25% of cases, whose histological appearance is identical to ovarian endometrioid carcinoma with cribriform or solid areas, with squamous or mucinous metaplasia.[1] The other histological types like clear cell, mucinous, transitional and undifferentiated carcinoma are also described. High grade fallopian tube serous carcinoma overexpress p53 (intense and diffuse nuclear staining in more than 75% of the cells) like ovarian carcinoma.[2]

The various prognostic factors for FTC are stage of the disease, histologic grade of the tumour, residual volume of the tumour after cytoreduction and presence of ascites; with stage of the disease being the most important.[4,7] Surgery is the treatment of choice. In advanced disease cytoreductive surgery resecting as much as possible of the tumor is warranted. However, given

the strong tendency to lymphatic spread of the tumor, a systematic pelvic and para-aortic lymphadenectomy should be preferred. Additionally chemotherapy is warranted, gold standard being combination of platinum-taxane, as in epithelial tumors of the ovary.

CONCLUSION

Primary tubal cancer is rare, of unknown etiology and mostly mistaken for ovarian carcinoma. The clinical signs and symptoms are non specific and histopathological examination is the gold standard for final diagnosis.

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Source of Support: Nil; **Conflict of Interest:** None

Submitted: 02-05-2019; **Accepted:** 04-06-2019; **Published:** 30-06-2019