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PRIMARY FALLOPIAN TUBE ADENOCARCINOMA: A CASE REPORT

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ABSTRACT

Purpose: Primary fallopian tube carcinoma (PFTC) is a rare tumor that histologically and clinically resembles to epithelial ovarian cancer (EOC). The purpose of this study is to present a case history, treatment & review the current available literature on PFTC.

Material, methods and results: Early clinical presentation and prompt investigation often lead to diagnosis at an early stage. The diagnosis of PFTC is rarely done preoperatively and is usually detected by the pathologist. Surgical staging, management and the use of combination chemotherapy based on concepts similar of epithelial ovarian cancer (EOC).The timely diagnosis of PFTC leads to better survival compared with EOC. However, as with EOC, stage and residual tumors are the most important prognostic variables.

Conclusion: Tumors of the fallopian tube can be suspected pre-operatively with current radiological facilities. Aggressive clinical search should also be made for a concomitant primary or as an isolated metastatic secondary of another primary cancer. Until more extensive clinical research has been performed, ovarian carcinoma management principles should be used in clinical practice.

INTRODUCTION: Primary fallopian tube carcinoma (PFTC) is an uncommon tumor accounting for approximately 0.14%-1.8% of female genital malignancies [1, 10].

Based on the cancer registries data in the U.S., average annual incidence of PFTC is 3.6 per million women per year [18].

True incidence of PFTC has been underestimated because; PFTC mistakenly identified as ovarian tumors during initial surgery and/or during microscopic examination, due to identical histological appearance.

These cases should be managed aggressively at primary surgery in view of the poor outcome- reportedly worse than that of ovarian cancer.

Case History: A postmenopausal, 54 years old woman referred to Department of Radiotherapy, Regional Cancer Centre, Pt. BDS PGIMS ROHTAK with chief complaints of pain abdomen of 10-15 days. She was examined locally and investigated.

The CT scan of abdomen and pelvis showed a heterogeneous mass in upper pelvis, separate fused uterus.

The mass had peripheral enhancement on CECT and was extending to abdomen and surrounding mesentery, severe irregularity of wall of adjoining gut was also noticed.

Enlarged para aortic lymph nodes were also seen.

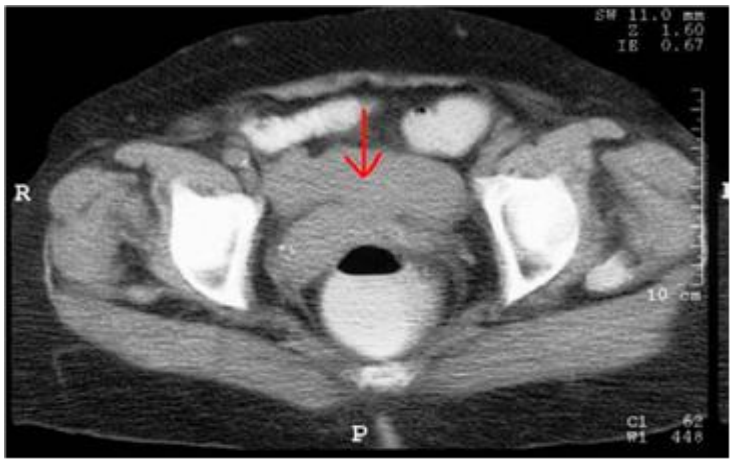


FIG. 1: CONTRAST ENHANCED CT SCAN SHOWING FALLOPIAN TUBE CARCINOMA DEPICTING A LEFT ADNEXAL MASS

Treatment:

Surgery: Total Abdominal Hysterectomy with Bilateral SalpingoOophorectomy was done.

Histopathology: The histopathological examination of the resected specimen revealed poorly differentiated adenocarcinoma arising from right fallopian tube. Both ovaries did not show any pathological change.

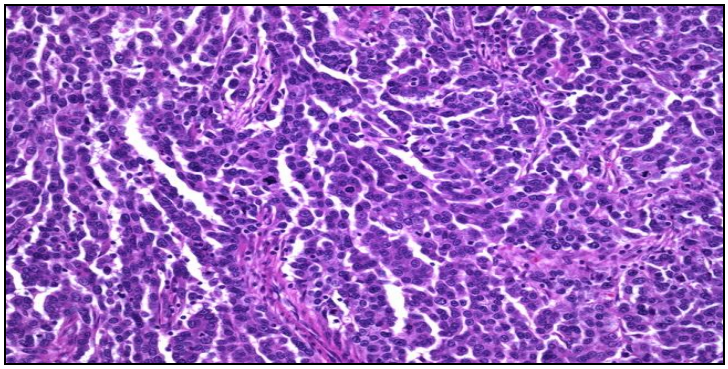


FIGURE 2 HISTOPATHOLOGICAL EXAMINATION OF FALLOPIAN TUBE CARCINOMA SHOWING THE TUMOR CELLS IN NESTS, SHEETS AND ILL-DEFINED GLANDS H&E 200X

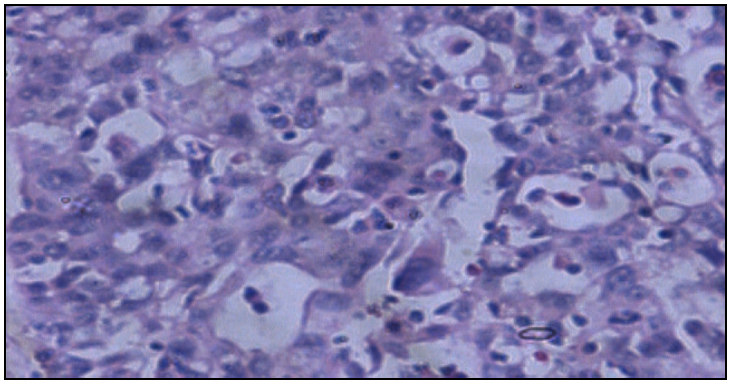


FIG. 3: HISTOPATHOLOGICAL EXAMINATION OF FALLOPIAN TUBE CARCINOMA SHOWING TUMOR CELLS, IN NESTS SHEETS AND GLAND. H& E 400X

Uterus showed senile cystic atrophy and cervix showed chronic cervicitis.

CA 125 level was 144 U/ml.

Chemotherapy: She was administered 6 cycles of PEC (Cisplatin- 150mg, Epirubicin- 120mg, Cyclo-phosphamide- 1 gm) completed on July 20, 2004.

December 2005: Developed single Left Supraclavicular LAP of Size - 3×3cm, and CA 125 level was 1613 U/ml.

FNAC – Showed features suggestive of metastasis from poorly differentiated carcinoma.

Treatment - She received six courses of 2nd line chemotherapy with Paclitaxel -260 mg and Carboplatin- 450mg which completed in May 2006.

CA-125 level returned to 21.64 U/ml.

September 2006: Rise in level of CA- 125 to 296.46 U/ml.

PET CT: Study showed increased uptake in Left Supraclavicular lymph Node.

Superior mediastinal and retrocaval node measuring 2.1×1.6 cm in size.

A single nodule was present in Left lobe of thyroid.

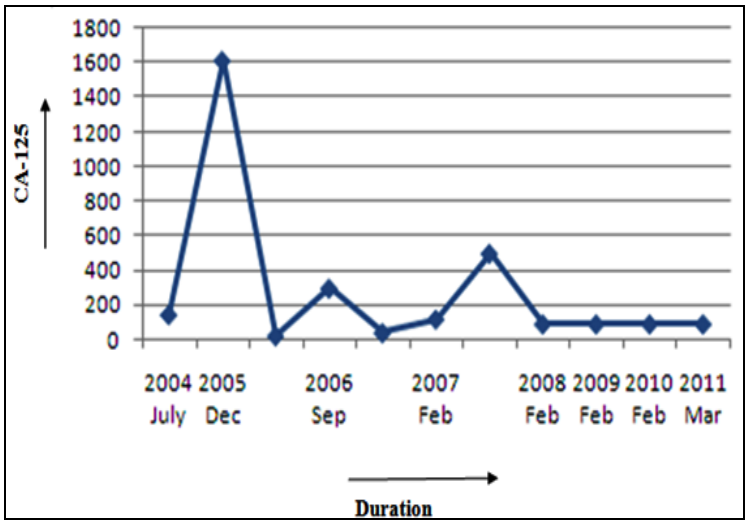
Treatment: Again she received six courses of 3rd line combination chemotherapy with Gemcitabine - 1.4 gm and Vinblastine which completed in Dec 06.

CA-125 level again returned to 39.65 U/ml.

February 2007: Rise in CA-125 level to1178.98 U/ml was found**.** Patient was put on Melphalan 4 mg for three months and CA125-level decreased to 408 U/ml.

Gefitinib 250 mg was added and Melphalan was stopped after one year.

March 2011: Gefitinib is continuing till date and patient's CA-125 level presently is 90.4 U/ml. The patient is asymptomatic till date.



GRAPH SHOWING Ca-125 LEVEL WITH RESPECT TO TREATMENT AND TIME

DISCUSSION: The Overall survival (OS) rate for PFTC patients is approximately 30%–50%, compared with 40% for patients with Epithelial Ovarian Carcinoma (EOC) [1, 2]. Generally, the reported 5-year survival rate is about 65% or higher [3, 4]. Most important prognostic factor is Stage of disease.

Benedet and Miller [5] calculated the 5-year survival rates in relation to stages: 62% for stage I, 36% for stage II, 17% for stage III, and 0% for stage IV.

Similarly, Rosen *et al*., [6] in a retrospective analysis of 115 patients, found 5-year survival rates of 50.8% for stages I and II and 13.6% for stages III and IV. The 5-year survival rates are influenced by the quality of surgical staging and the different therapeutic regimens. [7].

As in EOC, residual disease after initial surgery is also a significant prognostic factor [8]. Patients with stage III–IV disease had a 5-year survival rate of 55% if the residual tumor was <1 cm in diameter, compared with 21% for those with larger residual tumor (p = .0169) [8].

With disease extant to the fallopian tube, and the depth of invasion of its wall was correlated with the risk for treatment failure [9]. The presence or absence of invasion of the tubal wall, the depth of invasion, and the location of the tumor within the tube (fimbrial or nonfimbrial) appeared to be significant prognostic factor [11].

However, Vaughan *et al*., [12] reported that grade significantly correlated with survival. In recent finding grade is correlated with lymphogenous metastases [13]. The presence of lymphocytic infiltration has also been suggested to be associated with a more favorable outcome [14].

Other reported prognostic factors include advanced age [15], serous versus endometrioid, bilaterality, positive peritoneal cytology, site of tumor within the tube (fimbrial versus nonfimbrial), HER-2/neu expression, p53 alteration and elevated pretreatment CA-125 level [16].

PFTC shares several biologic and clinical features with EOC. However, when compared with EOC, PFTC more often tends to recur in retroperitoneal nodes and distant sites. Stage, patient age, and patients with advanced disease, residual tumor after initial surgery are the most important prognostic factors for survival [17].

CONCLUSION: PFTC is a rare tumor accounting for <1% of all female genital tract cancers.

Histologically and clinically, it resembles EOC.

The diagnosis of PFTC is rarely considered preoperatively and is usually first appreciated at the time of operation.

Both carcinomas have a similar age distribution, are more common among nulliparous women, and are often of serous papillary histology.

Surgery should consist of total abdominal hysterectomy, bilateral salpingo-oophorectomy, omentectomy, and lymph node dissection from the pelvic and para-aortic regions.

Stage and residual tumor are the most important prognostic factors for outcome.

Stage I high-risk disease or stage IIA disease, should receive 3–6 cycles of adjuvant Carboplatin plus Paclitaxel. Patients with advanced disease should be treated with a combination of Carboplatin plus Paclitaxel, as with EOC.

Second-line treatment for persistent/recurrent disease should be based on the platinum-free interval, whereas secondary cytoreduction should be considered only for highly selected patients.

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