



## Case Report

# Primary carcinoma of Fallopian tube : Case Series

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### ABSTRACT

Primary Fallopian tube carcinoma (PFTC) is an uncommon gynecological condition and often leads to diagnostic pit fall at the end of clinician in lieu of non specific clinical symptoms, physical findings and mimicking ovarian neoplasm. Abdominal pain, pressure symptoms and clear or blood stained discharge per vaginum are the commonest encountered non specific clinical symptoms. We are discussing three cases of Fallopian tube carcinoma in view of sporadic occurrence, non specific presentation and enthusiastic therapeutic modalities available for these malignancies.

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## Introduction

Primary Fallopian tube carcinoma (PFTC) is considered an uncommon tumor and it often closely resembles epithelial ovarian cancer both clinically and histologically thus presenting diagnostic challenge to both the clinician and pathologist.<sup>1,2</sup> Primary fallopian tube carcinoma represents less than 1% of all the gynecological malignancies with incidence ranging from 0.14 – 0.18.<sup>3,4</sup> The etiology of PFTC is poorly understood. Non specific clinical symptoms include abdominal pelvic pain or symptoms of pressure and vaginal bleeding along with watery vaginal discharge.<sup>5,7</sup> Intra operative and post operative encounter of fallopian tube carcinoma are most common.<sup>6</sup> Primary Adenocarcinoma is the commonest histological sub type followed by endometrioid, mixed, undifferentiated, clear cell, transitional and mucinous tumor.

## Case Report(S)

**CASE 1:-** A 44 year old multiparous woman (gravida 2 para 2) normotensive, non diabetic female was admitted with complaints of watery discharge per vaginum since one month. On investigations her TLC count was raised  $15 \times 10^9/L$ . USG of whole abdomen showed heterogeneous hypo echoic area with tiny cystic components and low level internal echoes in the pouch of Douglas(POD) in the right side and suspicion of pelvic endometriosis was raised. Her CT lower abdomen / KUB showed right fallopian tube filled with fluids. A lobulated heterogeneous enhancing soft tissue mass lesion of size 7.9x5.8x6.6 cm. was seen in right adnexa extending posteriorly to POD. CA-125 was 56.7 U/ml (Normal 0-35 U/ml).

In view of presumptive diagnosis of mass in the fallopian tube, exploratory laprotomy followed by salpingectomy was done. The specimen was sent for frozen section which confirmed carcinoma. There after total abdominal hysterectomy with bilateral salpingo – oophorectomy with bilateral omentectomy with bilateral lymph node dissection with peritoneal biopsies was carried out.

Peritoneal fluid examined was negative.

Histopathological examination revealed poorly differentiated serous carcinoma of the fallopian tube of right side (fig.1 ) with tumor limited to one tube without penetrating the serosal surface ( $T_{1a}$ ). Bilateral pelvic lymph nodes, peritoneal biopsies and omental tissue examined did not reveal any malignant involvement. Thus patient was diagnosed as case of primary fallopian tube carcinoma stage 1.

Patient came for follow up post surgery and is now asymptomatic.

**CASE 2:-** 31 year old multiparous (gravida 2 para 2) came to surgical oncology OPD with complaints of lower abdomen pain and discharge per vaginum. Her ultrasonography revealed small right ovarian endometriotic cyst. MRI pelvis with contrast showed ill defined lobulated mildly enhancing altered signal intensity lesion in the right adnexae with right ovary partially seen separately and was thought to be right ovarian neoplastic lesion. Enlarged lymph nodes along bilateral external and internal iliac groups were noted. Small posterior wall uterine fibroid was also observed. Patient underwent exploratory laprotomy. Intraoperative frozen section performed raised possibility of malignancy and staging laprotomy was carried out.

The histopathological examination revealed poorly differentiated serous adenocarcinoma of right fallopian tube with macroscopic peritoneal metastasis outside the pelvis (stage III Chronic). The tumor spread was noted to right ovary and right mesovarian tissue with tiny deposit in the omentum. Right and left pelvic nodes as well as retroperitoneal lymph nodes also revealed metastatic tumor deposit.

The post operative period was eventful. Patient was given 7 cycles of chemotherapy and follow up with CA-125 levels in each cycle which was 52.12 U/ml in first cycle and consecutively was lowered down to 31.43 U/ml in subsequent cycles. The hematological and biochemical parameters performed during the chemotherapy instillation were within the normal limit.

**CASE 3:-** A 70 year old multiparous women (gravida 6 para 5) postmenopausal following hysterectomy since 30 yrs was admitted in the emergency department with complaints of severe lower abdominal pain since six months. Patient was admitted. Her investigations revealed Hb – 10 gm/dl, TLC –  $20 \times 10^9/l$  and raised ESR – 50 mm. Ultrasonography performed revealed left sided tubo – ovarian abscess with small hypoechoic areas in the left adnexae.

In view of presumptive diagnosis of left tubo – ovarian abscess with hypoechoic lesion the patient was explored. Per - operatively extensive adhesions were noted in the left pelvic region with pus discharge oozing from the tubo – ovarian surface. The pus was collected and sent for microbiological examination revealed growth after 24 hours as patient was already on antibiotic treatment. The patient went into hypotension and was desaturated during the surgery and her condition worsened so exploratory laprotomy was halted and only multiple tissue pieces aggregating to 7.5x6.5x2.5 cm were removed and patient was shifted to ICU.

The histopathological examined revealed primary adenocarcinoma of fallopian tube with extensive into the surrounding fibrocollagenous as well as muscular stroma (fig.2 & 3). The diagnosis of endometrioid adenocarcinoma of left fallopian tube was given. Her staging work up was



**Fig. 1: Gross photograph showing distorted right adnexa.**

## Discussion

Primary carcinoma of fallopian tube is one of the least commonly encountered gynecological malignancy. Cohen et al reported annual incidence of 3.6 per million women per year.<sup>2</sup> Stewart et al reported incidence of 0.41 per 1,00,000 women.<sup>1,6</sup> We diagnosed three cases of primary fallopian tube origin in a span of one year however no such case was encountered in last 5 year when we went through our past records.

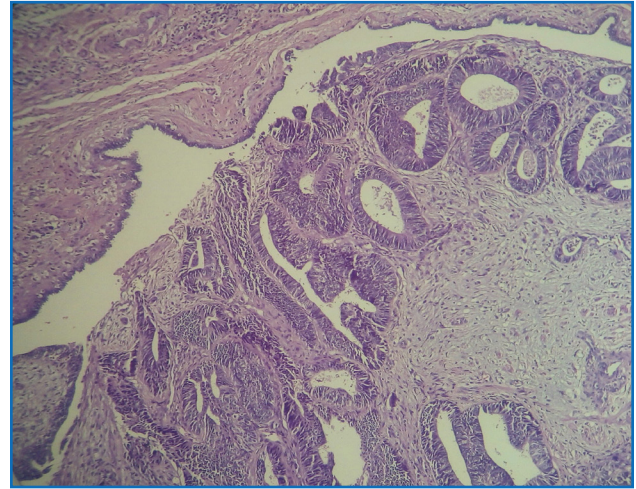
Adenocarcinoma of the fallopian tube is the commonest histological type and we came across two cases of poorly differentiated serous adenocarcinoma and one case of endometrioid adenocarcinoma type. Majority of the patients with primary adenocarcinoma of fallopian tube present with stage one disease at the time of diagnosis but their survival is slim compared with other early stage gynecological malignancies.<sup>4</sup> In our study one patient presented in stage IA disease and other patient presented in stage III – C.

Sedlis coined the following criteria to label a tumor as primary fallopian tube cancer <sup>6</sup>

1. The cell of origin is endosalpingeal
2. The tumor resembles the epithelium of the tube.
3. A zone of transition from benign to malignant epithelium is present.

done as pelvic lymph node dissection, peritoneal tissue examination or omentectomy were not carried out.

In the series of unfortunate events patient's hypotension worsened and BIPAP was started for desaturation but patient could not be revived.



**Fig. 2: Photomicrograph showing Adenocarcinoma originating from fallopian tube (H&E, 100x).**

4. The ovaries are normal or the ovarian tumor is smaller than the tubal tumor.

The median age at the time of diagnosis varies from 52 – 62 years.<sup>5</sup> In our case series patient aged 31 years developed stage III disease with lymph node metastasis and two other patients were of 44 years and 70 years.

Most common presenting symptoms pertaining to perimenopausal or post menopausal bleeding per vaginum are seen followed by amber colored vaginal discharge and abdominal pain.<sup>8</sup> In our study all the three patients had abdominal pain and vaginal discharge however bleeding per vaginum was not seen. In lieu of non specific symptoms diagnosis of fallopian tube carcinoma is missed per – operatively, suspicion followed by post – operative diagnosis is the commonest enlightening step as in our cases.

Baekelandt et al<sup>9</sup> stated that the preoperative diagnosis of PF TC could be assisted by measurements of serum levels of CA – 125 which is elevated in 65% of PFTC cases. In our case series two of our patient had raised CA -125 levels. CA -125 antigen is expressed in cases of fallopian tube malignancies and should be used in the diagnosis and follow up as done in one of our patient who underwent CA – 125 estimation consistently before surgery and thereafter

in post operative phase till it become within normal range (152.2 u/ml preoperative to 31.43 u/ml after four months of surgery)

Surgery is the treatment of choice of PFTC and procedure of choice is abdominal total hysterectomy, bilateral salpingo – oophorectomy, omentectomy, selective pelvic and para – aortic lymphadenectomy for any stage for fallopian tube carcinoma. Adjuvant chemotherapy as according to the guidelines for treating ovarian carcinoma is given with surgery. It is important to distinguish the origin of the primary tumor so as to instill carefully tailored adjuvant therapy.

### Conclusion

Primary carcinoma of fallopian tube is often misdiagnosed as well as under diagnosed due to non specific clinical presentation however diagnosis of PFTC should always be included in the differential diagnosis of tubo – ovarian masses or tubo – ovarian abscess.

Our study emphasis the importance of CA - 125 work up, frozen section facility utilization if available for per – operative diagnosis and carefully accordingly planned surgery to extract maximum benefit.

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