

**CASE REPORT**

## **Primary Adenocarcinoma of the Fallopian Tube Mimicking Pelvic Inflammatory Disease**

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### **ABSTRAK**

Karsinoma tiub falopian primer jarang ditemui dan sukar didiagnos prabedah. Kami melaporkan satu kes karsinoma tiub falopian primer yang ditemui pada seorang wanita berumur 50 tahun yang mempertunjukkan simptom penyakit inflamatori pelvis. Pemeriksaan ultrasound menunjukkan hidrosalfinks bilateral. Walaubagaimanapun, imbasan CT menunjukkan ciri-ciri yang menandakan kanser ovari. Pembedahan dilakukan di mana terdapat dilatasi teruk pada tiub falopian kiri. Pemeriksaan histologi mengesahkan adenokarsinoma serus primer pada tiub tersebut. Bahagian rahim dan kedua-dua ovari adalah bebas dari kanser. Laporan ini menekankan bahawa karsinoma tiub falopian primer harus difikirkan sebagai salah satu diagnosis yang mungkin pada pesakit yang mempertunjukkan simptom penyakit inflamatori pelvis.

*Kata kunci:* karsinoma tiub falopian, penyakit inflamatori pelvis, diagnosis

### **ABSTRACT**

Primary fallopian tube carcinomas are rare and are difficult to diagnose preoperatively. We describe a fallopian tube carcinoma in a 50-year-old lady who presented with symptoms of pelvic inflammatory disease. Ultrasound examination showed bilateral hydrosalpinx. However, CT scan showed features suggestive of a malignant ovarian tumour. At surgery, a markedly dilated left fallopian tube was found and histopathological examination confirmed the presence of a primary serous adenocarcinoma. The uterus and both ovaries were free of tumour. This report highlights that carcinoma of the fallopian tube should be considered as a differential diagnosis in females who present with lower abdominal pain.

*Key words:* fallopian tube carcinoma, pelvic inflammatory disease, diagnosis

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## INTRODUCTION

Primary adenocarcinoma of the fallopian tube is extremely rare and account for approximately 0.14-1.8% of all gynaecological malignancies (Gadducci 2002). The classical triad of symptoms of pelvic pain, pelvic mass and a serosanguinous discharge, also known as "hydrops tubae profluenta" described by Latzko in 1916 (Lawson et al. 1996), rarely helps to diagnose such cases in clinical practice. In many reported cases tubal carcinoma are diagnosed during surgery for unrelated problems. We describe here a case of primary adenocarcinoma of the fallopian tube in a lady who presented with symptoms suggestive of pelvic inflammatory disease. The tumour was only confirmed following histopathological examination.

## CASE REPORT

A 50-year-old post-menopausal Indian lady (para 3) was referred from a peripheral clinic for lower abdominal pain of three months' duration. The pain that had worsened over the past two weeks was intermittent and pricking in nature and had radiated to the back. There was no history of fever or change in bowel or urinary habits. In addition, her symptoms were not associated with postmenopausal bleeding. The patient had been diagnosed with diabetes mellitus, which was treated with oral antihyperglycaemics. She had a laparotomy 26 years ago but the indications for the surgery and its findings were not apparent. She had bilateral tubal ligation six years later. On physical examination the patient was comfortable and had no evidence of jaundice or pallor. Her abdomen was soft and no masses were felt. Interestingly, a pelvic examination did not reveal any mass in the adnexa or pouch of Douglas either.

An ultrasound scan revealed an empty uterus measuring 8.5x5.0 cm with un-

remarkable endometrium. However, a tubular mass was noted on each side of the uterus, measuring 3.6x4.5 cm on the right and 5.4x2.7 cm on the left. The ovaries were not enlarged and there was no ascites. A provisional diagnosis of pelvic inflammatory disease with bilateral hydrosalpinx was made.

Following this, a CT scan of the pelvis and abdomen was performed. It showed a bulky uterus with bilateral adnexal cysts. The left cyst measured 4.1x2.7 cm (Fig.1) and it contained a solid area measuring 1.5x1.9 cm. The right cyst measured 3.1x1.6 cm with no solid areas within it. There was no evidence of ascites and the para-aortic lymph nodes were not enlarged. The liver showed a 2.2x1.5 cm enhancing lesion in segment VI. A diagnosis of a malignant left ovarian cyst with liver metastasis was suggested.

At laparotomy, both fallopian tubes were dilated and elongated. The uterus, cervix and both ovaries were unremarkable. The Pouch of Douglas and omentum were normal and there was no ascites.

A total abdominal hysterectomy and bilateral salpingoophorectomy was performed.

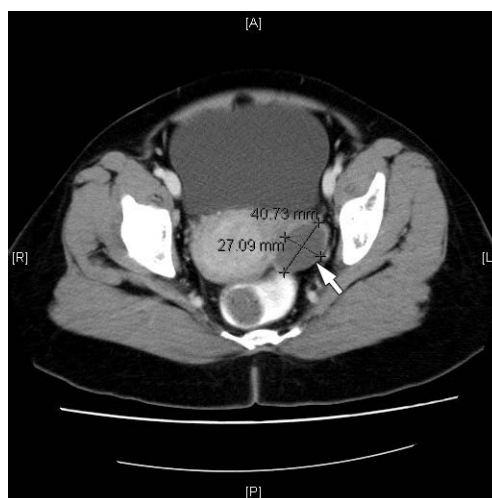


Figure.1: CT scan shows a cystic mass in the left adnexa (white arrow).

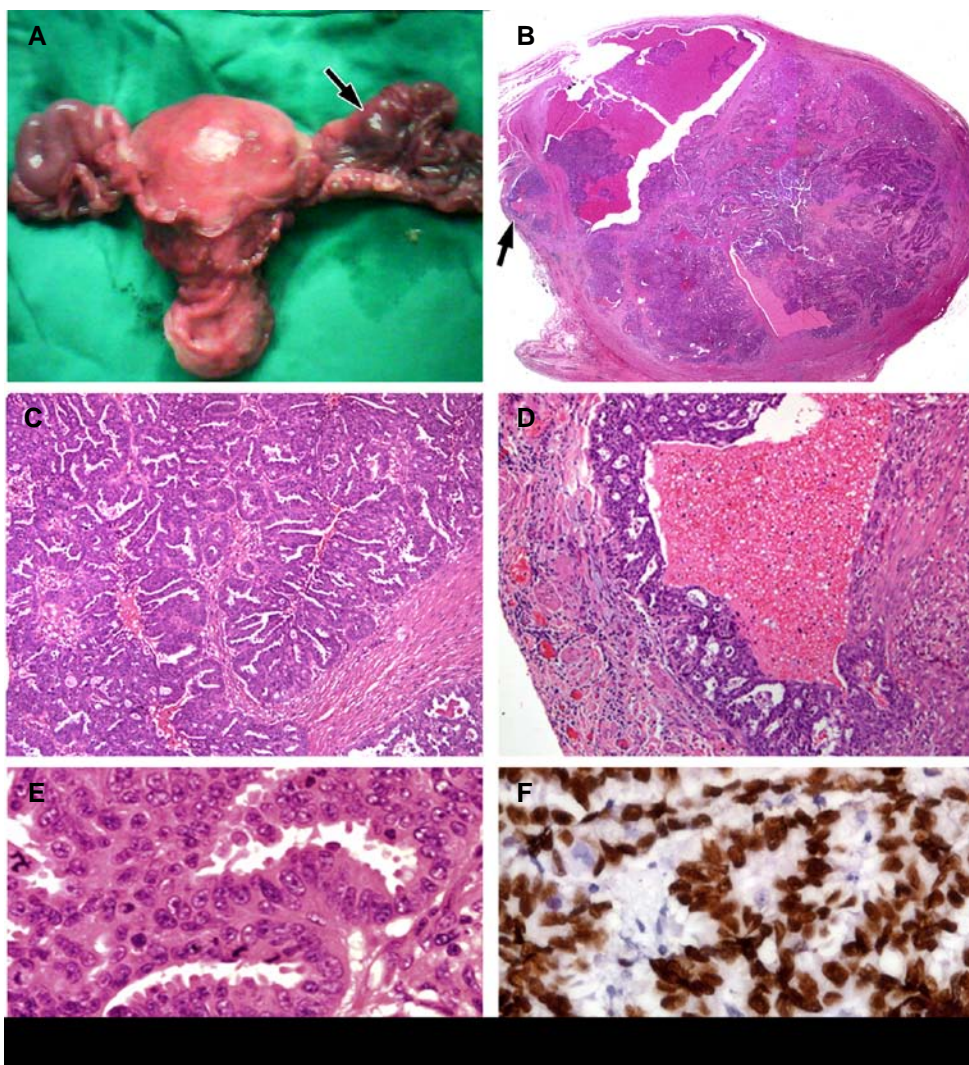


Figure 2: A) Gross appearance of the specimen showing a dilated left fallopian tube (arrow). B) Low power view shows a solid-cystic intraluminal tumour distending the lumen and infiltrating the muscular wall (arrow) of the organ. C) The tumour forms complex papillary architecture with slit-like lumina. D) High power view shows that the tumour has infiltrated the muscular wall but did not breach the serosa. E) The tumour cells are pseudostratified columnar type that exhibit high nuclear grade and many mitotic figures. F) The malignant cells show an over-expression of p53.

Grossly, the left fallopian tube was markedly distended and measured 10x3 cm (Fig.2A). Cut section showed a mixed solid and cystic tumour within its lumen (Fig.2B). The right fallopian tube measured 10x1.5 cm. There was a small cyst (one cm) arising from the fimbrial end.

Histological examination of the left fallopian tube tumour revealed the presence of a moderately differentiated, high grade adenocarcinoma forming papillary architecture. The papillae forms irregular branching pattern with slit-like lumina (Fig.2C) and are highly cellular. The

tumour infiltrated the muscular layer of the fallopian tube but it did not breach the serosa (Fig.2D). Mitosis was brisk (>20/10hpf) (Fig.2E) and areas of necrosis were present. The uterus, cervix, both ovaries and right fallopian tube were free of tumour. Immunohistochemistry revealed diffuse expression of WT1 and p53 (Fig.2F) in the tumour cells. A diagnosis of high-grade serous adenocarcinoma of the left fallopian tube was made.

## DISCUSSION

Primary fallopian tube carcinoma is a rare malignancy of the female genital tract that is rarely diagnosed preoperatively. The tumour is often mistaken for a benign pelvic disease or ovarian cancer. However, in contrast to ovarian carcinoma, fallopian tube malignancies more often present at an early stage but are usually high grade with a worse prognosis, stage for stage. The tumour usually originates in the ampulla and histological pattern reproduces the epithelium of the fallopian tube mucosa, frequently presenting as serous adenocarcinoma (Salvador et al. 2009).

In the present case, the patient presented with symptoms of pelvic inflammatory disease that failed to respond to antibiotic treatment. A decision to proceed with a laparotomy was made when the CT scan reported a possible malignant ovarian tumour. In retrospect, an intraoperative frozen section of the fallopian tube would have helped decide on a more definitive surgical procedure.

The presentation of fallopian tube carcinoma as pelvic inflammatory disease has also been reported by others (Cristalli et al. 1992, Kurjak et al. 1998). In addition, the tumour may mimic tubo-ovarian abscess that failed to respond to therapy as reported by Halperin et al.

(2005). In their report, malignant cells were aspirated from sonographically guided drainage of the suspected tubo-ovarian abscess and the CA125 levels were elevated prior to surgery, further supporting a malignant pathology. Previous reports also emphasized the poorer prognosis fallopian tube adenocarcinoma carry compared to ovarian carcinoma. Five-year survival of patients with stage I disease is only about 60% and only 10% of patients with advanced disease will be cured (Ng and Lawton, 1998). In conclusion, fallopian tube carcinoma should be considered as a possible diagnosis in females diagnosed with pelvic inflammatory disease but do not show significant respond to treatment.

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