Case Report

A rare primary malignant tumor of fallopian tube

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ABSTRACT

Primary adenocarcinoma of fallopian tube is one of the rarest and accounts for about 1% of all gynecological malignancies. We are presenting this rare case of the primary fallopian tubal carcinoma. A 60-year-old female patient with para 2 visited the Gynecologic and Obstetric Department with the complaints of white discharge and abdominal pain since 4 months duration. Radiological study suggested hydrometra with polypoidal growth in the left adnexa suggestive of malignant lesion. The patient underwent the total abdominal hysterectomy with bilateral salpingo-oopherectomy along with the omental resection. On histopathology diagnosed as the primary adenocarcinoma of the fallopian tube and was confirmed by immunohistochemistry with cytokeratin-7 positivity.

Key words: Malignancy, IHC:CK-7, primary fallopian tube lesion

INTRODUCTION

Primary adenocarcinoma of the fallopian tube accounts for approximately 1% of all female genital tract malignancies.[1] The most tubal carcinomas are high-grade serous carcinomas or endometrioid carcinomas. The incidence of the primary tubal carcinoma is underestimated because the advanced tumors that have spread to the ovaries or peritoneum are often diagnosed as the primary ovarian or peritoneal cancers.[2]

Tubal carcinoma occurs mainly in the upper middle–aged women. The average patient age is 55 years, but the fallopian tube cancer occurs over a wide age range, from 20 to more than 80 years of age.[1,2] As many as 30% of patients with fallopian tube carcinoma have germline BRCA1or BRCA2 mutations.[3-6]

CASE REPORT

A 60-year-old female patient with para 2 visited the gynecologic and obstetric outpatient department with the complaints of white discharge and abdominal pain since 4 months duration on and off. Radiological study suggested the hydrometra with polypoidal growth in the left adnexa suggestive of malignant lesion. The patient underwent the total abdominal hysterectomy with bilateral salpingo-oopherectomy along with the omental resection. The uterus was atrophic with elongated cervix measuring 7 cm × 4.5 cm × 2 cm, right tube, and ovary were unremarkable, left ovary was normal and the left tube was dilated and measured 8 cm × 4 cm. The external surface was smooth showing a multiloculaed cyst filled with grey-brown gelatinous material, a solid, and solitary papillary growth was attached to the tubal luminal surface measuring 2 cm × 2 cm. The cut surface is grey-white homogenous with irregular outer margins. On gross examination of omentum, the growth is not seen and lymphnodes are not identified [Figure 1a and b].

Microscopic study of uterus, right tube, both ovaries and omentum was unremarkable. Sections from the left tubal solid growth showed tumor cells arranged in solid nests with intervening fibro-collagenous stroma. The tumor cells show moderate to marked pleomorphism with hyper chromatic nuclei, prominent nucleoli, binucleated and multinucleated tumor giant cells also seen occasionally, with significant increase in mitotic activity all over the

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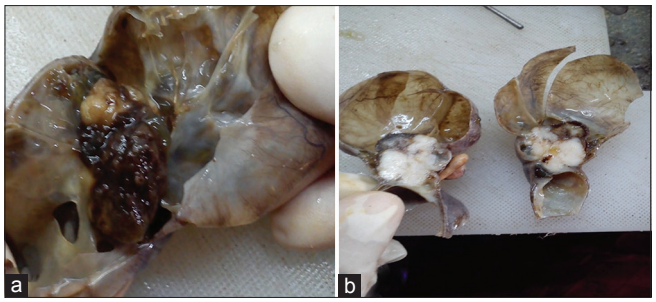

Figure 1: (a) Fallopian tube cut open show grey-brown irregular solid mass. (b) Cut section of growth show grey-white homogenous solid growth

tumor (3-5 mitotic figures/high-power fields). The margins of tumor mass were extending with normal tubal lining epithelium on either side, the tubal wall show disrupted smooth muscle bundles outside the tumorous lesion. Immuohistochemistry was done for cytokeratin-7 (CK-7) and CK20. The tumor was confirmed as fallopian tube origin by positive for CK-7 and negative for CK-20 [Figure 2a-d]. Postoperative patient had no complication. Follow-up until date patient have not developed recurrence or any other complication.

DISCUSSION

Primary carcinoma of the fallopian tube was first described by Renaud in 1847. From then, there have been nearly 1500 cases documented in the literature.[7,8] In a retrospective study of 151 patients, it was noted that the patients usually present with abnormal vaginal bleeding (47.5%), lower abdominal pain (39%), abnormal watery vaginal discharge (20%) and a palpable pelvic/abdominal mass (61%).[9] The patients presents with the typical clinical symptoms termed as "hydrops tubae profluens" that is, they will have pelvic pain, lower abdominal mass, and serosanguinous vaginal discharge.[7,8] Also called triad symptoms of Latzke.[10] Preoperatively the lesion may be misdiagnosed as ovarian tumor or hydrosalpinx. A correct diagnosis of primary fallopian tubal carcinoma (PFTC) was made preoperatively in only 4.6% of cases in the series of Alvarado-Cabrero *et al*.[2]

Patients with PFTC have a higher rate of retroperitoneal and distant metastasis than those patients with epithelial ovarian cancer. The stage of disease at the time of diagnosis is the most important factor affecting the prognosis. PFTC carries 5-year survival rates of about 68-76% for Stage I disease, 27-42% for Stage II disease, and 0-6% for Stage III and IV disease, so it is very important to diagnose these neoplasms in the early stages.[11,12] Surgery is the treatment of choice for PFTC. The procedure involves abdominal total hysterectomy with bilateral salpingo-oophorectomy, omentectomy, selective pelvic and para-aortic lymphadenectomy for any stage for fallopian tube carcinoma. Microscopically all major types

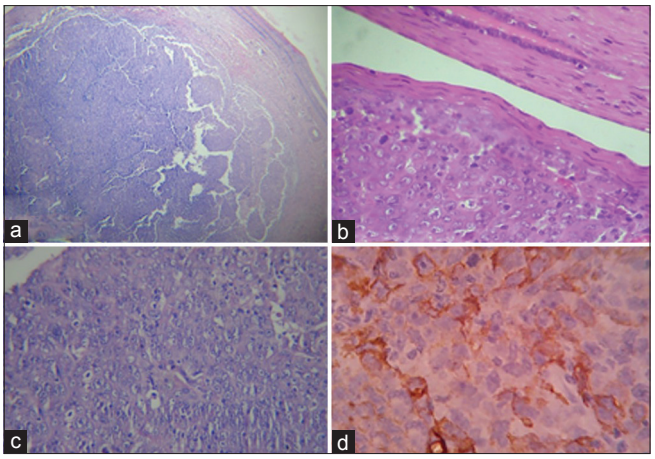

Figure 2: (a) Photomicrograph shows tumor cells arranged in solid nests (H and E, ×10). (b) Tumor cells are in continuity with lining epithelium of fallopian tube (H and E, ×40). (c) The tumor cells show moderate to marked pleomorphism with hyper-chromatic nuclei, prominent nucleoli with increase in mitotic activity (H and E, ×40). (d) Immunohistochemistry showing cytokeratin-7 positive (H and E, ×40)

of carcinomas known to occur in ovary are reported, 95% of them being papillary serous and 5% comprising of endometrioid, mucinous, seromucinous, clear cell and transitional cell.[13] Peters *et al*.[14] reported that the malignant peritoneal cytology is the strongest predictor of overall survival and the only one to be significant in the multivariate analysis. Rosen *et al*.[15] found that bleeding as a presenting symptom is associated with a significantly longer overall survival regardless of the stage of the disease.[15] The rationale that bleeding is associated with prolonged survival does not relate to early detection. Perhaps these tumors were more angiogenically active and more sensitive to anti-cancerous chemotherapy even in the advanced stage of the disease.[15]

In our case, patient presented with abdominal pain and white discharge on and off since 4 months duration, it was preoperatively diagnosed as adnexal mass probably malignant in origin from ovary on radiologic investigation. On histopathological examination, it was diagnosed as poorly differentiated adenocarcinoma and was confirmed by immunohistochemistry as malignant tumor of fallopian tube.

CONCLUSION

Primary fallopian tumors are rarely diagnosed preoperatively and usually considered as ovarian tumor or benign inflammatory tubal mass. The fallopian tube carcinoma should always be considered for proper surgical plan, when patient comes with complains of abdominal pain and abnormal vaginal discharge or fail to respond to antibiotic therapy, as tubal carcinomas have more potential for metastasis than ovarian tumors.

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Conflicts of interest
There are no conflicts of interest.

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