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Primary Fallopian Tube Carcinoma Presenting as Inguinal Lymphadenopathy

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Abstract:

Primary fallopian tube carcinoma is a rare tumor which histologically and clinically resembles epithelial ovarian cancer. Pelvic and para-aortic lymph nodes are often involved but presentation with inguinal lymph node involvement is rare. We report case of a 64 year postmenopausal parous woman who presented with 4 months history of swelling in left groin, excised and confirmed to be metastatic adenocarcinoma. An exploratory laparotomy with total abdominal hysterectomy, omentectomy with pelvic and para-aortic lymph node dissection was done. Uterus, right fallopian tube and ovaries were normal. Left fallopian tube was distended with a mass of 4x4 cms. Histology of left fallopian tube revealed adenocarcinoma. Histology of left and other structures was normal. All lymph node extirpated were negative. Fallopian tube adenocarcinoma rarely presents as metastatic inguinal lymphadenectomy.

Key words: Fallopian Tube Neoplasms, Adenocarcinoma, Laparotomy, Hysterectomy, Ovarian Neoplasms.

Introduction

Primary fallopian tube malignancy is uncommon and accounts for 0.3% of all female genital malignancies [1]. The annual incidence of the tumor is reported to be 0.41 per 100,000 women. Pre-operative diagnosis is rare as the clinical features are non-specific and mimic those of ovarian cancer both clinically and histologically. Most cases are diagnosed intra-operative or later [2]. Primary adenocarcinoma of fallopian tube with papillary features is the most common histologic type of primary tubal cancer (>90%). Especially serous carcinoma appears to be the most common histologic type. Primary fallopian tube cancer (PFTC) is usually managed in the same manner as ovarian cancer [3]. Early lymphatic metastasis is recognised in fallopian tube carcinoma. Pelvic and para-aortic lymph nodes are often involved. Inguinal metastasis is a hitherto rarely reported presenting feature of fallopian tube adenocarcinoma.

We report a case of a 64 years old lady who initially presented with left sided inguinal swelling, which was confirmed to be a metastasis from a fallopian tube adenocarcinoma.

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Case Report

A 64 years old post-menopausal parous woman presented with a 4 month history of swelling in her left groin. There was a history of weight loss and reduced appetite over the last 2 months. She was referred to a general surgeon from a local district hospital and she underwent local excision of the enlarged left inguinal lymph node. Histology confirmed metastatic poorly differentiated adenocarcinoma. Immunohistochemistry revealed metastatic adenocarcinoma positive for CK 7, WT 1, CA-125 with over expression of p53 consistent with ovarian primary; serous papillary sub-type. Thus patient was referred to gynaecology department for further investigation and management. There was no history suggestive of gynaecological pathology and clinical examination revealed normal pelvic organs with no obvious palpable adnexal masses. A recent cervical smear and chest X-ray were normal. A PET-CT scan showed right ovarian mass measuring 3×2.4×2.4 cm with increased FDG uptake in the mass. No significant abdomino-pelvic adenopathy or ascites was noted. Rest of scan was unremarkable. Her tumor markers were normal with CA-125: 13.54 and CEA: 2.10. A exploratory laparotomy with total abdominal hysterectomy and bilateral salpingo-oophorectomy, omentectomy, pelvic and para-aortic lymph node dissection was performed.

On gross examination uterus with right adnexa looked normal. A solid, firm, left parafimbrial mass 3.5×2.6×2.0 cm was seen. Left ovary looked unremarkable [Fig.1,2]. On histopathological examination right ovary and fallopian tube were unremarkable. Left ovary showed corpora albicantia and left fallopian tube

Fig.1: Gross picture of left parafimbrial mass.

Fig.2: Gross features of the fallopian tube malignancy.

was unremarkable. Left parafimbrial mass showed areas of necrosis and diagnosis of malignant mixed mullerian tumor adencarcinoma. Endometrium was in atrophic phase with unremarkable myometrium and cervix. She was staged as FIGO 3c [Fig.3]. The post-operative period was uneventful and patient was discharged in satisfactory condition after a hospital stay of 10 days. Patient is currently on chemotherapy.

Discussion

Carcinoma arising in fallopian tube accounts for no more than 1% of all gynaecological cancers. This carcinoma is associated with infertility, low parity and chronic salpingitis with a peak in 6th decade of life. Major risk factors appear to be similar to those for ovarian cancer oral contraceptives and child birth both being strongly positive. Cytogenic studies show that the disease is associated with over expression of p53 (81%), HER 2/neu (89%) and c-myc (61%). There is also some evidence of BRCA1/BRCA 2 mutations having a role in tumour genesis [4]. The cumulative life time risk of developing hereditary breast ovarian cancer syndrome approaches 100%. These hereditary breast ovarian cancer syndrome include fallopian and primary peritoneal cancers.

The classically described symptom triad of postmenopausal bleeding, colicky unilateral pelvic pain and vaginal discharge is not often seen, making diagnosis difficult. Most cases remain undiagnosed pre-operatively [5]. A study by Kujak *et al*. in 2005 showed that a three dimensional ultrasound allows a precise depiction of tubal wall irregularities. Study of the vascular architecture in cases of fallopian tube malignancies could be further enhanced by 3D power Doppler imaging [6]. The tumor marker serum CA-125 is often elevated but not seen in our case. In patients of elevated CA-125 level, the ratio of epithelial ovarian to tubal cancer is 6:1. Therefore reliable pre-operative diagnosis requires a high index of suspicion and careful exclusion of alternative pathologies by alternative means.

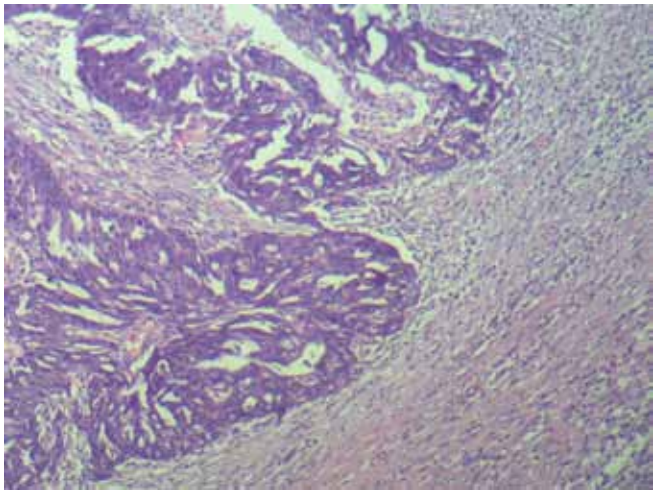

Fig.3: Histopathological features of the tumor.

It typically spreads by intraperitoneal seeding, local invasion or a combination of both. As a result, presentation with extra- abdominal lymphadenopathy, especially in the absence of pelvic and intra-abdominal disease is a rare occurrence. The lymphatic drainage of fallopian tubes mirrors that of the uterine fundus and ovaries. Lymph channels follow the ovarian vessels and the external iliac blood vessels to the para-aortic and pelvic lymph nodes respectively and run along the round ligament of the uterus to superficial inguinal lymph nodes. Early lymphogenous metastasis is common and when there is extra tubal spread of disease the incidence of positive nodes is 40-60% [7]

Metastatic carcinoma in inguinal lymph nodes is well known in vulval, vaginal and rectal tumors. Inguinal metastases from ovarian malignancies are reported in upto 3% of all cases. This can be only site of lymphatic spread and may also be a presenting feature. Management of PFTC depends on the stage of the disease, this being based on

the FIGO system. Stage I and II patients are known to do well with primary surgical and adjuvant therapy, while the prognosis of stage III/IV patients is worse. The surgical management includes total abdominal hysterectomy with bilateral salpingo-oophorectomy, omentectomy and pelvic and para-aortic lymphadenectomy. Adjuvant chemotherapy administration depends on the stage of the disease.

Conclusion

This case represents an unusual presentation of early primary fallopian tube carcinoma. It illustrates the importance of high index of suspicion when dealing with inguinal lymphadenopathy with ovarian mass. It highlights the vital role of clinical, pathology and radiological correlation in diagnosis of such malignancies presenting in atypical circumstances.

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