Primary Fallopian Tube Carcinoma Presenting with Isolated Controlateral Inguinal Lymphadenopathy

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ABSTRACT

Primary fallopian tube carcinoma is a rare tumor accounting for <1% of all female genital tract cancers. Presentation primarily as inguinal lymphadenopathy alone is rare. We report a case of a 57-year postmenopausal woman who presented with seven months history of swelling in the right groin, excised and confirmed to be metastatic adenocarcinoma. CA-125 was elevated with a value of 960 U/ml. An exploratory laparoscopy was done, with total abdominal hysterectomy, omentectomy, and appendicectomy, without lymph node dissection. Uterus, right fallopian tube, and ovaries were normal. The left fallopian tube was distended with a mass of 6x5 cm. Histology of left fallopian tube revealed high-grade adenocarcinoma with malignant peritoneal cytology. Histology of right fallopian tube and other structures was normal. The patient received four cycles of adjuvant carboplatin plus Taxol with good biological and radiological response. She was referred to our institute for a second look surgery and lymph node dissection. Two months after the end of chemotherapy, she underwent the second surgery consisting of a pelvic, para-aortic and right inguinal lymphadenectomy with a sample from the left inguinal node. There were two metastatic nodes. The patient received six other cycles of carboplatin plus Taxol. At present, she remains well, and CA-125 is normal. Fallopian tube adenocarcinoma rarely presents as metastatic inguinal lymphadenectomy. The management of this malignancy is generally the same as epithelial ovarian cancer.

Keywords: Adenocarcinoma, Fallopian Tube Neoplasms, Ovarian Neoplasms

1. INTRODUCTION

Primary fallopian tube malignancy is uncommon and accounts for < 1% of all female genital malignancies\(^1,2\). This tumor resembles epithelial ovarian cancer (EOC); histologically and clinically. While pelvic and para-aortic lymph nodes are often involved, inguinal metastasis is rarely reported. Most cases are diagnosed intra-operative or later\(^3\). Primary fallopian tube cancer (PFTC) is usually managed in the same manner as ovarian cancer\(^4\).
2. CASE REPORT

A fifty-seven-year-old woman presented in 2015 with painful swelling in the right groin of 7 months duration. She was a postmenopausal woman since five years and have three children. There was no family history of ovarian or breast cancer. Her general condition was fair. In the right femoral triangle, there was a 4-cm tense, irreducible mass. Other systems on examination including the breasts were unremarkable. An ultrasound of the right groin revealed the mass to be an enlarged inguinal lymph node. The node was excised and sent for histological examination, and it revealed metastatic gynecological adenocarcinoma. It was CEA positive and CK7, CK20 and CK5/6 negative. CT-scan of the chest, abdomen, and pelvis was done to find out possible primary, and it showed suspect right inguinal and iliac lymph nodes enlargement (ranging in size from 2.5 to 6 cm). Tumor marker CA-125 was 960 U/ml (normal value for the lab 0-35U/ml). An exploratory laparoscopy was done, with total abdominal hysterectomy, omentectomy, and appendicectomy, without lymph node dissection. Uterus, right fallopian tube, and ovaries were normal. The left fallopian tube was distended with a mass of 6x5 cm. Histology of left fallopian tube revealed high-grade adenocarcinoma with malignant peritoneal cytology. Histology of right fallopian tube and other structures was normal. Adjuvant chemotherapy was indicated, and the patient received four cycles of carboplatin and Taxol. A CT scan was done after three cycles of chemotherapy and showed a decrease in the size of the lymph nodes estimated for 50%. CA-125 decreased to 6 U/ml. The patient was referred to our institute for a second look surgery and lymph node dissection. Two months after the end of chemotherapy, she underwent the second surgery consisting of a pelvic, para-aortic and right inguinal lymphadenectomy with a sample from the left inguinal node. There were two metastatic nodes; one right inguinal and one pelvic. The patient received six other cycles of carboplatin plus Taxol. At present she remains well, thoracic and abdominopelvic CT was normal, and CA-125 was normal.

3. DISCUSSION

Fallopian tube carcinoma is one of the rarest gynecologic tumors, accounting for <1% of all gynecological cancers\(^2\). It resembles EOC. Both carcinomas have a similar age distribution, with a peak in the sixth decade of life. They are more commonly associated with infertility, low parity, and chronic salpingitis. Histologically they are often of serous papillary type. The classically described symptoms are postmenopausal bleeding, unilateral pelvic pain, and vaginal discharge. But most cases remain undiagnosed pre-operatively\(^5\).

Imaging can most often detect solid and cystic components with papillary projections, which on MRI can be remarkably enhanced after the administration of gadolinium\(^6\). We can also find peritumoral ascites, hydrosalpinx or intrauterine fluid collection\(^7\). MRI seems to be better than CT scan or ultrasound in detecting tumor infiltration of the bladder, rectum, vagina, pelvic sidewalls and pelvic fat.

Cytogenic studies show that the disease is associated with overexpression 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 tumor genesis\(^8\).

More than 80% of patients have elevated pretreatment serum CA-125 levels.

PFTC typically spreads by intraperitoneal seeding, local invasion or a combination of both. As a result, presentation with extra- abdominal lymphadenopathy is a rare occurrence. The lymphatic drainage of fallopian tubes mirrors that of the uterine fundus and ovaries. Early lymphogenous metastasis is common. When there is an extra tubal spread of disease, the incidence of positive nodes is 40-60%\(^9\). Metastatic carcinoma in inguinal lymph nodes is well known in vulval, vaginal and rectal tumors. Inguinal metastases from ovarian malignancies are reported in up to 3% of all cases.

PFTC is similar to EOC in surgical staging, surgical management, and indications for adjuvant chemotherapy. 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-ophorectomy, omentectomy and pelvic and para-aortic lymphadenectomy.

Aggressive debulking surgery should be attempted in patients with advanced disease. Both PFTC and EOC have a poor prognosis with stage and residual tumor size and respond to platinum-based chemotherapy. However, there are some differences between the two diseases: PFTC is more often diagnosed at an earlier stage, and the role of routine lymphadenectomy is well established in PFTC.
Stage and residual tumor are the most important prognostic factors for outcome. Adjuvant chemotherapy is indicated to treat patients with stage I low-risk disease and not submitted to complete surgical staging, as well as those with stage I high-risk disease or stage IIA disease. It is generally 3 to 6 cycles of carboplatin plus paclitaxel.

Patients with advanced disease should be treated with a combination of carboplatin plus paclitaxel, as with EOC\textsuperscript{(10)}.

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

More extensive clinical research must be performed in order to have definite etiologic, diagnostic, and management modalities, and prognostic markers.

### 4. CONCLUSION

It is very rare to find primary fallopian tube carcinoma presenting as inguinal lymphadenopathy. This case highlights the important role of clinical, pathological and radiological correlation in the diagnosis of such tumors. The management of this malignancy is generally the same as epithelial ovarian cancer.

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**REFERENCES**