

Ovarian carcinoma in normal size ovaries with inguinal lymph node metastasis: a case report

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Abstract

It is generally recognized that ovarian cancer tends to remain intra-abdominal even in advanced stages. This case report describes a patient with ovarian carcinoma who had an ulcerated fungating growth in her left groin area.

Case history: A 35yrs para2 women presented with a fungating left inguinal node of 5 X 4 cm for last 3 months. Biopsy revealed metastatic papillary adenocarcinoma. Clinical examination showed left sided pedal oedema. Laboratory investigation revealed increased CA125 (412IU/ml). Radiological studies were normal. In view of the raised Ca 125 she was treated in the lines of FIGO stage III cancer ovary with Paclitaxel 260mg and Carboplatin 450mg for three cycles. She responded dramatically with completely healed inguinal nodes. Then laparotomy with total hysterectomy, bilateral salpingo-oophorectomy partial omentectomy and inguinal lymph node dissection were performed. Histology confirmed right ovarian adenocarcinoma consistent with the earlier histology of the left inguinal lymph node. There were no other sites of involvement. Postoperatively, the patient received three more cycle of chemotherapy.

Conclusions: Ovarian cancer with inguinal lymph node metastasis is uncommon and only around 1% of ovarian carcinoma have a normal sized ovary. This case report demonstrates that early distal metastasis, although rare, can occur in patients with ovarian cancer and may be a compelling symptom of ovarian cancer.

Keywords: Ovarian cancer, metastasis, inguinal lymph node, chemotherapy

Introduction

Ovarian cancer is the most frequent cause of death among the cases of gynaecological cancers [1,2]. It represents tumors of epithelial, germ cell or sex cord stromal origin. Approximately 90% of ovarian tumors are epithelial in origin and poses significant therapeutic challenges as symptoms are more pronounced only in advanced stages. The life time risk of developing sporadic epithelial ovarian cancer is approximately 1.7%, but with familial predisposition, the risk increases to between 10% and 40% [3]. There has been a statistically significant improvement in 5 year survival rate of epithelial ovarian cancer over the last decade, from 36% in 1977 to 45% in 2002 due to more effective chemotherapy [1].

Generally, ovarian cancer presents itself as disseminated intra-abdominal disease at the time of diagnosis. Primary ovarian lymphatic drainage occurs via the infundibulopelvic ligament to para-aortic nodes. It is traditionally believed that only after its blockage, presumably by tumor emboli, retrograde drainage to pelvic and inguinal node can occur [4]. Also there is a phenomenon called "Normal size ovary carcinoma syndrome" [5] where metastatic disease coexists

with ovaries that are grossly normal in size. In about 1% of cases of ovarian cancer, the ovaries are normal in size [5,6]. Our patient was a case of "Normal size ovary carcinoma syndrome" with large metastatic inguinal nodes and without any evidence of disseminated intra-abdominal disease or gross evidence of pelvic or para-aortic lymph node involvement.

Case summary

On 18th April 2011, we met Mrs. HB, 35 year old and P2L2, who visited our institute complaining of swelling and ulceration in her left groin for the last 3 months. She came to our institute with a fine needle aspiration cytology (FNAC) report of well differentiated papillary adenocarcinoma from the inguinal mass. On clinical examination, we discovered that she had left sided pedal oedema. On further local examination, we found a 4 x 5 cm ulcerated fixed fungating growth in the left inguinal region. Per abdominally there was neither any mass felt nor any free fluid. Both the cervix and vagina were healthy, the uterus was anteverted and normal in size, and bilateral fornices were free. We found no abnormality on rectal examination.



Figure 1. CT Scan showing the metastatic inguinal lymph node.

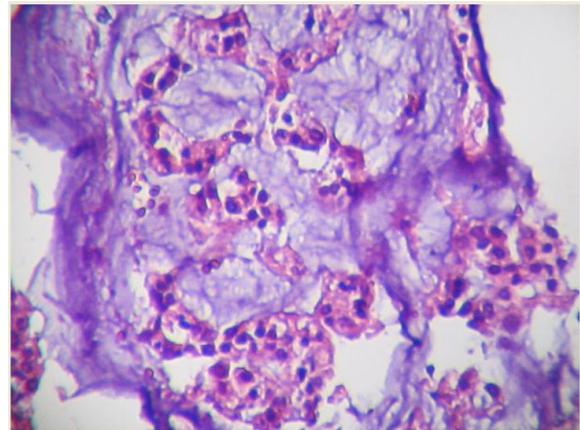


Figure 4. Histopathology of left ovarian specimen showing adenocarcinoma (H&E 40X).



Figure 2. Healed groin region after 3 cycle of chemotherapy.



Figure 3. Operative specimen showing normal sized ovaries and uterus.

A computed tomography scan (CT scan) showed multiple conglomerated lymph nodes in the left inguinal region measuring 5 x 6 cm in size (**Figure 1**). Bilateral adnexa and uterus were normal. There was no evidence of any pelvic or paraaortic lymph node and there was no free fluid either. Her upper and lower GI endoscopy were normal and her serum CA 125 was 412 IU/ml.

At the institute's tumor board meeting, we decided to treat her along the line of ovarian cancer FIGO stage III, in view of clinical, radiological and laboratory findings. We gave her three cycles of paclitaxel (260 mg) and Carboplatin (450 mg). She responded very well to chemotherapy with complete recovery of groin nodes (**Figure 2**). Exploratory laparotomy showed no evidence of any intra-abdominal tumor and she had a normal sized uterus and ovaries. She underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy, omentectomy and bilateral groin node dissection (**Figure 3**).

Post-operative histopathology showed foci of well differentiated adenocarcinoma in the left ovary and left groin node specimens (**Figure 4**). The right ovary, uterus, bilateral tubes, omentum and vaginal cut margin were free of any tumor. In view of the positive histopathology reports, we gave her three more cycles of chemotherapy and completed her treatment on 19th September, 2011. Her post treatment CA125 levels was 5IU/ml. She is on a regular follow up and is doing well till date.

Discussion

According to FIGO stage classification for ovarian cancer, lymph node metastasis is classified into stage III ovarian carcinoma. Ovarian cancer with inguinal lymph node metastasis is uncommon. Further, ovarian cancer manifesting as inguinal lymph node metastasis with normal size ovaries is extremely rare. To our knowledge, no such case has been reported till now. D.Ang *et al.*, [7] previously reported a case of a 54 year old lady with a contralateral inguinal node

swelling and an ovarian tumor measuring 9 x 6.4 cm in size. A similar case was reported earlier by Mcgonigle KF and Dudzinshi MR [8] where endometrioid carcinoma of ovary was found with an enlarged inguinal node without any evidence of abdominal carcinomatosis. Mance N et al., [9] also reported a case in 2006 where ovarian cancer was diagnosed with PET CT scan in a patient with bilateral inguinal lymphadenopathy as the primary complaint.

A few cases of recurrent ovarian cancer with inguinal lymph node metastasis have been reported by Kohoe et al., [10]. Brett A Winter-Roach et al., [11] reported a case of fallopian tube cancer with inguinal lymph node metastasis. Makoto et al., [12] reported a case of mucinous cyst adenocarcinoma with normal sized ovaries with elevated CA 19.9 levels (3483 U/ml) and normal CA 125 (28 U/ml).

The most common way in which epithelial ovarian cancer spreads is by transcoelomic spread to adjacent viscera [1]. Lymphatic drainage of the ovary follows its blood supply through the infundibulopelvic ligament to nodes of paraaortic region, but can also occur through the broad ligament and parametrial channels to external iliac, obturator and hypogastric chains. Rarely, epithelial ovarian cancer may also spread along the course of round ligaments resulting in involvement of inguinal lymph nodes [2]. Autopsy studies have reported inguinal metastasis in 0-3% of patients with advanced disease [3]. The third and least common way of ovarian cancer spreading is through the haematogenous route and occurs in 2-3% of patients. Distal organs and contralateral ovary may be involved in this manner.

Our case is an unusual occurrence of ovarian cancer, with normal sized ovary and no evidence of any intraperitoneal disease. The only visible feature was inguinal lymph node enlargement. Yet, we have to consider this as a stage IIIC disease. The impact of such clinical presentation on prognosis is unknown and no previous study has been reported on it. This case demonstrates that early distal metastasis, although rare, can occur in patients with ovarian cancer and may be a symptom to look out for when diagnosing ovarian cancer.

Competing interests

The authors declare that they have no competing interests.

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