



## **Inguinal Lymph Node Metastasis Presenting As a Delayed Site Metastasis in a Case of Early Endometrial Carcinoma.**

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### **Abstract**

**Introduction:** Obturator lymph nodes and external iliac nodes are the most common lymph nodes involved in carcinoma endometrium. Less than 5% of the cases with endometrial cancer present as stage IV disease with inguinal lymph node metastasis being 0.38%.

**Case Report:** We report a case of 62 year-old female, post-operative case of ca endometrium with left inguinal swelling since 3 months. MRI of the pelvis revealed 39mm\*28mm\*24mm nodular subcutaneous lesion in the left inguinal region. Biopsy from the mass reported as metastatic adenocarcinoma with the origin from endometrium. The patient underwent superficial and deep inguinal lymph node dissection. Histo-pathology reported as metastatic carcinoma with peri nodal infiltration. Immunohistochemistry were positive for CK7, PAX-8, Oestrogen and progesterone receptor

**Discussion:** The risk of recurrence in low grade endometrial cancer is less than 3% with majority of them occurring in the first 3 years. Inguinal lymph node metastasis in early endometrial cancer is rare with five

cases reported so far. Due to rarity of this scenario, the impact of inguinal LND followed by Post-Operative Radiation Therapy (PORT) in addition to hormonal therapy on the survival in these patients is not well known. Further studies need to be carried out before we can standardise the management in such cases

**Conclusion:** Inguinal lymph node metastasis as a delayed site of occurrence in a case of endometrial carcinoma is a rare phenomenon. However the efficacy of inguinal lymph node dissection with post-operative radiation and adjuvant hormonal treatment in terms of survival benefit needs further assessment.

**Keywords:** Endometrial carcinoma, Inguinal lymph node metastasis.

**Introduction:** Endometrial cancer is the most common gynaecological malignancy with an incidence of 1 in 40,000<sup>[1,2]</sup>. Metastatic spread in endometrial cancer is quiet predictable initially through lymphatics followed by hematogenous and direct spread. The risk of recurrence in early stage disease (International Federation of Gynaecology and Obstetrics (FIGO I and II) is between 3-

15%<sup>[3,4]</sup>. Of these that recur, 76-87% of cases occur within the first 3 years after initial treatment<sup>[5]</sup>. The most common site of recurrence is the vaginal vault and the pelvis<sup>[2]</sup>. Obturator lymph nodes and external iliac nodes are the most common lymph nodes involved in carcinoma endometrium<sup>[6]</sup>. This is followed by internal iliac, common iliac and paraaortic nodes in advanced cases. Less than 5% of the cases with endometrial cancer present as stage IV disease with inguinal lymph node metastasis being 0.38%<sup>[7,9]</sup>. We report a case of 62 year old female a known case of endometrioid adenocarcinoma FIGO 1A<sub>1</sub> Grade 2 presenting to us as initial delayed site metastasis in the inguinal region 7 years post-surgery.

**Case Report:** A 62 year old female was operated for Ca endometrium 7 years back. She underwent Total Abdominal Hysterectomy with Bilateral Salpingo-oophorectomy (TAH+BSO) with pelvic lymph node sampling. Histo-pathology reported as endometrioid adenocarcinoma, 2.5cms\*3cms mass in the posterior wall, grade 2 with less than 50% myometrial invasion. 14 and 17 lymph nodes were harvested on right and left side respectively and they were negative. Patient was not advised any adjuvant treatment and kept on regular follow up. Seven years post-surgery she reported to the outpatient department with left inguinal swelling since 3 months. Ultrasonography of the pelvis revealed a 35mm\*28mm enlarged lymph node in the left inguinal region. MRI of the pelvis revealed 39mm\*28mm\*24mm nodular subcutaneous lesion in the left inguinal region. It was hypo-intense on T1(Image1A), hyper-intense on T2(Image1B) and showed homogenous enhancement. Positron emission tomography (PET) imaging showed left inguinal node with standardised uptake volume (SUV<sub>max</sub>) 13.5. There was no evidence of metastasis elsewhere. Trucut biopsy from the left inguinal mass reported as metastatic adenocarcinoma with the origin from

endometrium. The tumour cells were positive for CK-7 and PAX-8. The patient underwent superficial and deep inguinal lymph node dissection (Image2). Histo-pathology reported as metastatic carcinoma with peri nodal infiltration. Immunohistochemistry were positive for CK-7, PAX-8, Oestrogen receptor and progesterone receptor. Her case was discussed in multidisciplinary tumour board meeting and a decision to start adjuvant radiation and hormonal therapy was made. Patient refused radiation therapy and is currently on hormonal therapy on follow up.

**Discussion:** Endometrial cancer is the most common gynaecological malignancy with an incidence of 1 in 40,000<sup>[1]</sup>. Of the many histological types, endometrioid adenocarcinoma is the most common histological subtype present. Endometrial cancer is staged surgically and classified according to the FIGO staging classification. FIGO stage I represent cancer confined to the body of the uterus. Further sub-classification depends on the dept of myometrial invasion. Stage IA represents <50% myometrial invasion while stage IB represents more than 50% myometrial invasion<sup>[2]</sup>. Our patient was staged IA as there was less than 50% myometrial invasion. Treatment of choice for stage IA disease is total abdominal hysterectomy with bilateral salpingo-oophorectomy with or without radiation. There are several risk factors identified for recurrence in early stage endometrial carcinoma which include histology grade, depth of myometrial invasion and age. Depending on these risk factors patients are categorised as low risk(histology grade 1 and 2, <50% myometrial invasion and age <50 years) and high risk for recurrence (grade 3, >50% myometrial invasion, age >60 years)<sup>[1]</sup>. National Comprehensive Cancer Network (NCCN) guidelines for endometrial cancer state adjuvant radiation therapy to be considered if two or more risk factors are present, although recent

studies have not shown an overall survival benefit with this approach. Our patient falls in the low risk group and hence she was advised no further adjuvant therapy and kept on a regular follow-up. The risk of recurrence in low grade endometrial cancer is less than 3-15% with majority of them occurring in the first 3 years<sup>[3-5,8]</sup>. The most common site for endometrial recurrence are vaginal vault and pelvis<sup>[9]</sup>. Inguinal Lymph node metastasis in early endometrial cancer is very rare with five cases being reported so far in English literature (Table1). The precise mechanism of inguinal lymph node metastasis is still unknown. As per FIGO staging system, inguinal nodes metastasis from endometrial carcinoma are classified as FIGO stage IVB, and is regarded as a systemic disease. Immunohistochemistry is as an important diagnostic tool in identifying the site of tumour origin in cases of difficult pathological differential diagnosis. Tumours of Mullerian origin are positive for PAX-8<sup>[14,15]</sup>. In our case IHC was positive for PAX-8 thus establishing the metastatic origin of inguinal lymph node mass. PE-CT scan serves as an important imaging diagnostic tool in assessing treatment response as well as monitoring relapse<sup>[16]</sup>. There are ongoing trials assessing the utility of PET-CT in monitoring treatment response. PET-CT was performed at baseline and at 2 weeks and 6 weeks following initial treatment. Changes in total lesion glycolysis (TLG) after 2 weeks predicted partial response and a rise in SUV<sub>max</sub> between 2 weeks and 6 weeks predicted progression and was associated with worse progression free survival. In addition, early response evaluation with FDG PET/CT was useful in predicting subsequent radiological PR and progression disease<sup>[16]</sup>. Given the limited reported data on this issue, more investigation is needed. There are guidelines suggesting the use of PET-CT as compared to MRI and CECT for relapse assessment in terms of sensitivity, specificity and accuracy<sup>[16,17]</sup>.

Due to rarity of this scenario, the impact of inguinal LND followed by Post-Operative Radiation Therapy (PORT) in addition to hormonal therapy on the survival in these patients is not well known. Further studies need to be carried out before we can standardise the management in such cases.

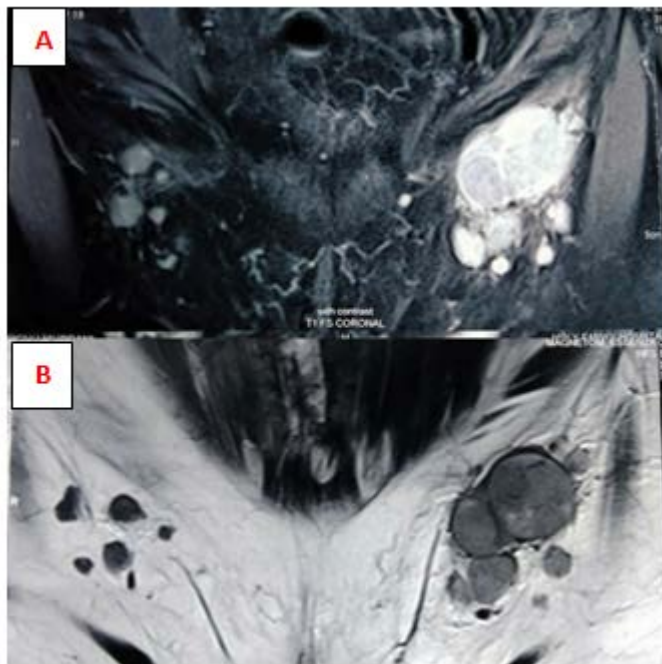
**Conclusion:** Inguinal lymph node metastasis as a delayed site of occurrence in a case of endometrial carcinoma is a rare phenomenon. However the efficacy of inguinal lymph node dissection with post-operative radiation and adjuvant hormonal treatment in terms of survival benefit needs further assessment.

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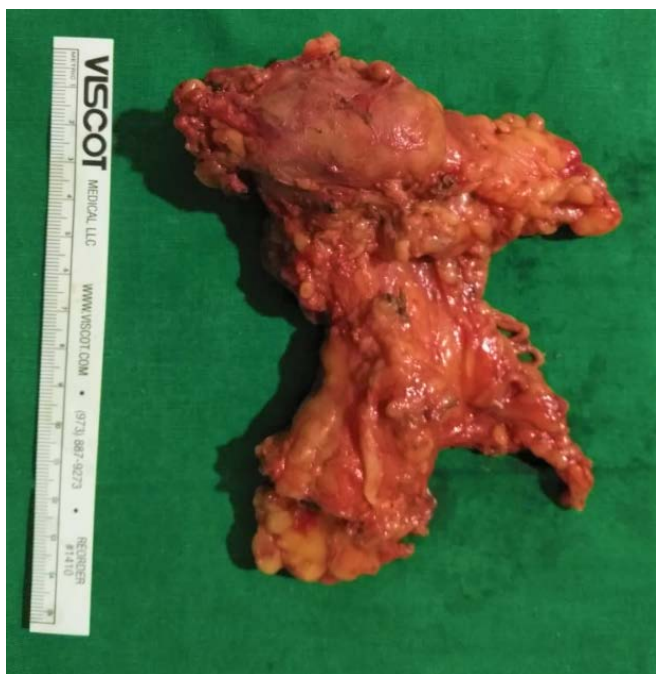
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Figure and Tables



**Figure 1:** MRI of the pelvis shows 39\*28\*24 mm nodular subcutaneous lesion (a) hypointense lesion on T1 (b) hyperintense on T2.



**Figure 2:** Surgical specimen of left inguinal lymph node dissection.