



## Sternal metastasis in a case of carcinoma endometrium - Diagnostic dilemma.

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### Abstract:

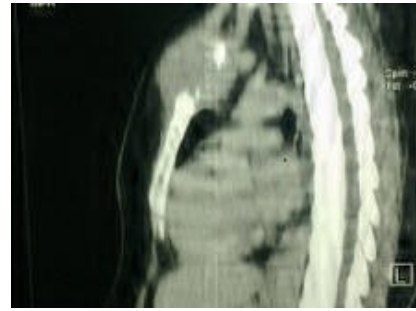
Carcinoma endometrium rarely presents with metastasis to bone and endometrial primary is rarely thought of in case of bone metastasis from a carcinoma. Available literature review suggests that this presentation is quite unusual in carcinoma endometrium. Here we share our experience of a woman presenting with a swelling arising from sternum which on evaluation was found to be metastasis from endometrial primary.

Cervical carcinoma is the most common gynaecologic malignancy in India affecting pre and perimenopausal women whereas carcinoma endometrium is generally seen in postmenopausal women. Presenting symptom is usually vaginal bleeding (90%) and most of the patients are at early stage (73%) and the disease is limited to the uterus at initial diagnosis [1].

Metastasis of the endometrial adenocarcinoma is in descending order to the lymph nodes, lung and the liver. Metastasis to the bone is very rare and thought to be arising from blood borne dissemination of cancer cells. Bone metastases from unknown primary at presentation later found to be of endometrial adenocarcinoma origin is an even rarer presentation. We present this case here because of rarity of its presentation.

## Case Report:

We present the case of a 37 year multigravida lady who presented in our outpatient department with a swelling in manubrium sterni of two months duration. Her only other complaint was menorrhagia for past two years. On clinical examination thyroid, both breasts, axillae, abdomen were normal. A magnetic resonance imaging showed a mass lesion 5x5x5 cm involving upper part of manubrium sterni without intrapleural extension. A bone scan was done which showed uptake in manubrium sterni and left first rib. A provisional diagnosis of bone metastasis from unknown primary was made. Apart from chest radiograph and a Magnetic resonance imaging, positron emission tomography was done which showed uptake in manubrium with irregular enhancing mass lesion in endometrium with nodes in periportal and interaortocaval region. The diagnosis of malignancy was confirmed by core cut biopsy was done from the sternal lesion which was suggestive of poorly differentiated carcinoma and an endometrial aspiration biopsy performed to sample the endometrial lesion. Endometrial biopsy was suggestive of a poorly differentiated carcinoma with immunohistochemistry correlation done showed small cell neuroendocrine carcinoma hence a diagnosis of metastatic endometrial carcinoma was made and the patient is awaiting chemotherapy.



CT image showing sternal metastasis

## Discussion:

Bone metastases are the most common malignant bone tumours, and the most common primary is lung and breast cancers in women and prostate and lung in men. Despite metastasis to bone is common in solid tumours, it seldom occurs in endometrial adenocarcinoma. The prevalence of bone metastasis from endometrial cancer has been estimated to be 5% [1]. In a large clinical study of patients with endometrial adenocarcinoma, 4.8% of 927 surgically treated were found to have stage IV disease and only two of these patients had bone metastasis (0.05%) [2]. Various case reports describe about 10 cases where disease presenting as metastasis to bones on evaluation was found to be carcinoma endometrium.

In another retrospective series of 21 cases of carcinoma endometrium metastatic to bone between 1990 to 2007 from Memorial Sloan Kettering cancer centre 6 patients had bone metastasis as the presentation [5]. The average time from detection of bone metastasis at any site to death in endometrial adenocarcinoma is reported to be about 6 months. In another series overall survival of those patients with bone metastases at primary diagnosis was 17 months [3]. Palliative treatment with radiation is reported as effective in many cases.

Vertebrae are the most common metastasis sites from carcinoma endometrium [4]. Rarely cases of carcinoma endometrium metastatic to extremity bones have been described. Bone metastasis is usually seen together with intra-abdominal and pelvic recurrences and/or other organ metastases. Endometrial metastases to the bone are generally restricted to the pelvis and vertebrae; peripheral skeletal metastases are very unusual and thought to result from the haematological spread of tumour cells. A high incidence of bone metastasis with high-grade adenocarcinoma was revealed. Another rare presentation of carcinoma endometrium is skin metastasis which were found in about 1% in one large autopsy series.

## Conclusion:

Although a rare event, endometrial cancer can metastasize to the bone. If a bone lesion is identified, treatment using a multimodality approach is reasonable, especially if found as an isolated recurrence. A diagnosis of metastatic endometrial carcinoma should be considered in patients presenting with bone metastasis of uncertain origin especially if other commoner sites have been ruled out. It should be remembered that bone metastasis at unusual sites might be seen in gynaecological cancers. Positron emission tomography is a valuable tool in detecting primary tumour if uncertainty about possible primary exists.

## References:

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