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# Soft Tissue Metastasis from seminoma of the Testis- a Rare Case Report

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**ABSTRACT**
Testicular cancer, like other histopathologic types, commonly metastasizes to the lungs, liver, and brain. Spread to soft tissues, however, is rare with only four cases with seminoma reported. We report the case of a 38-year-old man who presented with a painful soft tissue swelling in the left forearm. The patient had a previous history of seminoma right testes with metastases to lungs. For any patient with solid organ malignancy who presents with soft tissue mass with pain, apart from primary soft tissue sarcoma, metastasis should be considered in differential diagnosis.

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## INTRODUCTION

Metastases to soft tissue are uncommon and easily can be confused with primary soft tissue sarcoma clinically and histopathologically [1, 2]. The differential diagnosis between a metastatic neoplasm and a primary soft tissue sarcoma is critical, because their treatment is markedly different. Although soft tissue metastasis can represent the initial manifestation of a primary malignancy, it usually is seen as late evidence of recurrence in advanced cancer. Its incidence is rare, as low as 0.16% and 0.8%. [3]

Most primary testicular tumours originate from germ cells. Germ cell tumours are classified for clinical purposes into two major groups: seminomas or nonseminomas. Pure seminoma is the most common testicular tumour and generally has a more favourable prognosis than nonseminomas. Nonseminomas include embryonal carcinoma, teratoma, choriocarcinoma, and yolk sac tumour. The most common sites of metastasis from testicular cancer are the lungs, liver, and brain [4]. Choroidal, eye, gingiva, skin , and kidney also have been reported as uncommon sites for metastasis.

Although metastasis of soft tissue from the various cancer types, including the lung, breast, kidney, and colon, have been documented comprehensively , soft tissue metastasis of testicular cancer rarely has been reported with only four patients with seminoma and one with immature teratoma .

We describe the case of a seminoma of the testis that metastasized to soft tissue.

### Case Report

A 38-year-old man presented with two months history of gradually enlarging painful soft tissue swelling in the left forearm. Physical examination showed a large soft tissue swelling in the extensor aspects of left forearm.

The past history of the patient was significant. Patient complained of right testicular swelling two years ago. Serum alpha fetoprotein (AFP) and beta human chorionic gonadotropin were normal. CT scan of the thorax and abdomen was normal at this time.

The patient subsequently got right radical orchiectomy. Histopathological examination of the

testicular mass showed seminoma of the right testes with no invasion of the adjacent structures. He also underwent chemotherapy. Then he was disease free for two years.

He was then referred to our hospital for the above mentioned forearm swelling two years after the initial diagnosis. At this time also, his AFP and BHCG was normal.

MRI of the left forearm revealed a well marginated soft tissue intensity lesion with solid, few cystic/necrotic, haemorrhagic components and septations on extensor aspects of distal forearm. Haemorrhagic areas appeared hyper intense on T1 and hypo intense on T2W images. Lesion was splaying extensor pollicis longus and abductor pollicis longus muscles. It was causing mild extrinsic scalloping on adjacent cortex of ulna with no obvious marrow infiltration. Distal radius was unremarkable. No encasement of radial and ulnar vessels was seen. The lesion measured approximately 25x32x67mm.

He also underwent CT thorax and abdomen, which showed multiple nodular lesions of varying sizes with no calcification in bilateral lung parenchyma. Prevascular enlarged node of size 16x11.5mm with necrosis and peripheral enhancement and no calcification was also seen. CT abdomen was normal with no evidence of retroperitoneal lymphadenopathy.

Fine needle aspiration cytology of the left thigh mass was inconclusive. Therefore, a Tru-cut biopsy was performed. Histopathologic examination of the biopsy specimen revealed metastatic poorly differentiated malignant neoplasm with morphology suggestive of germ cell neoplasm. The diagnosis of soft tissue metastasis of a seminoma of the testis was made.

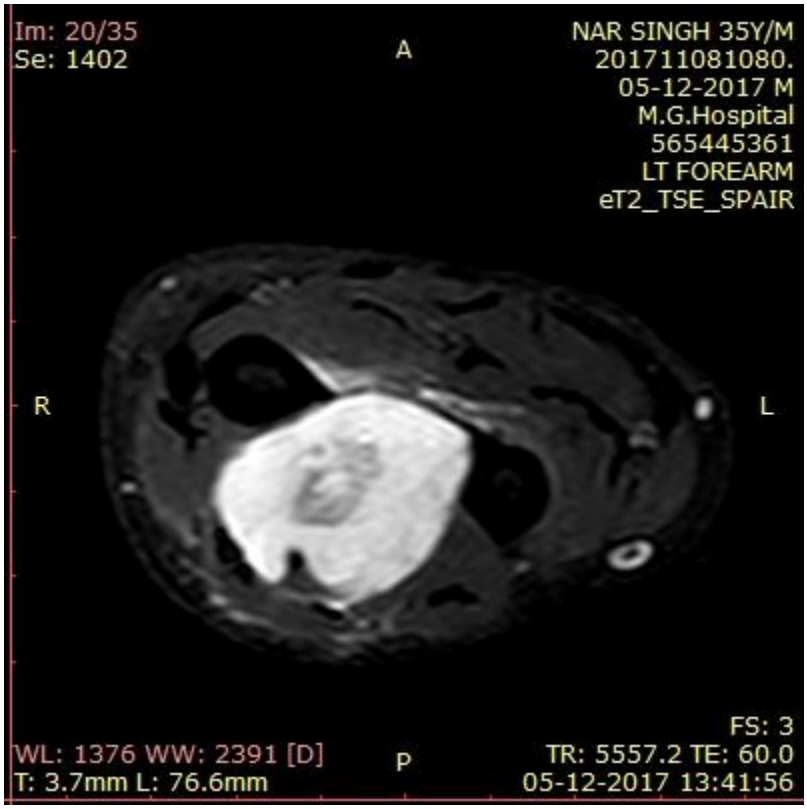


**Figure 1 &2 –axial and sagittal images shows a well marginated soft tissue intensity lesion with solid**



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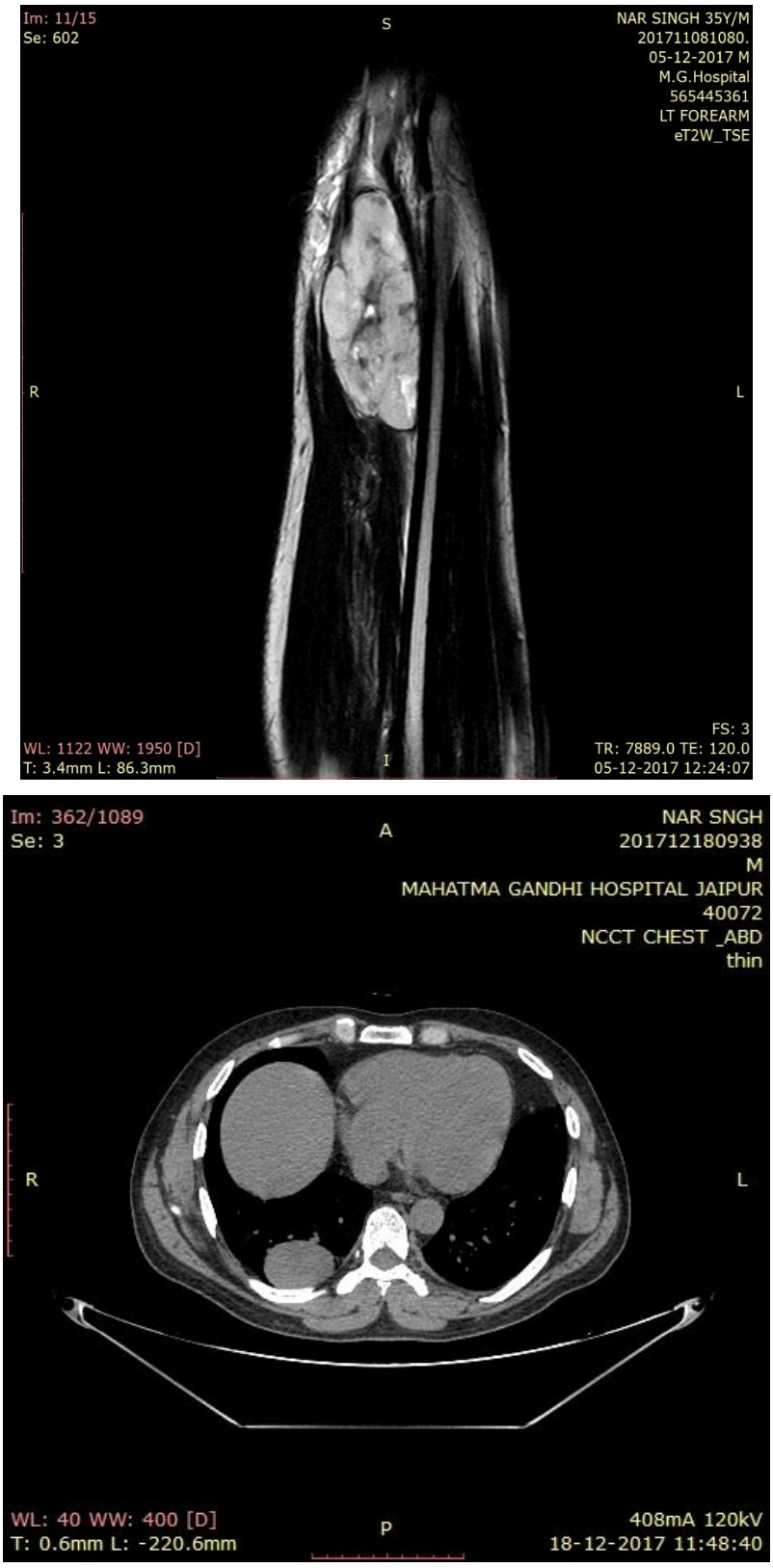


**Figure 1CECT THORAX shows well-defined round to oval soft tissue density lesion in right lower lobe. Similar other variable sized lesions were also seen in bilateral lung fields suggestive of metastasis.**



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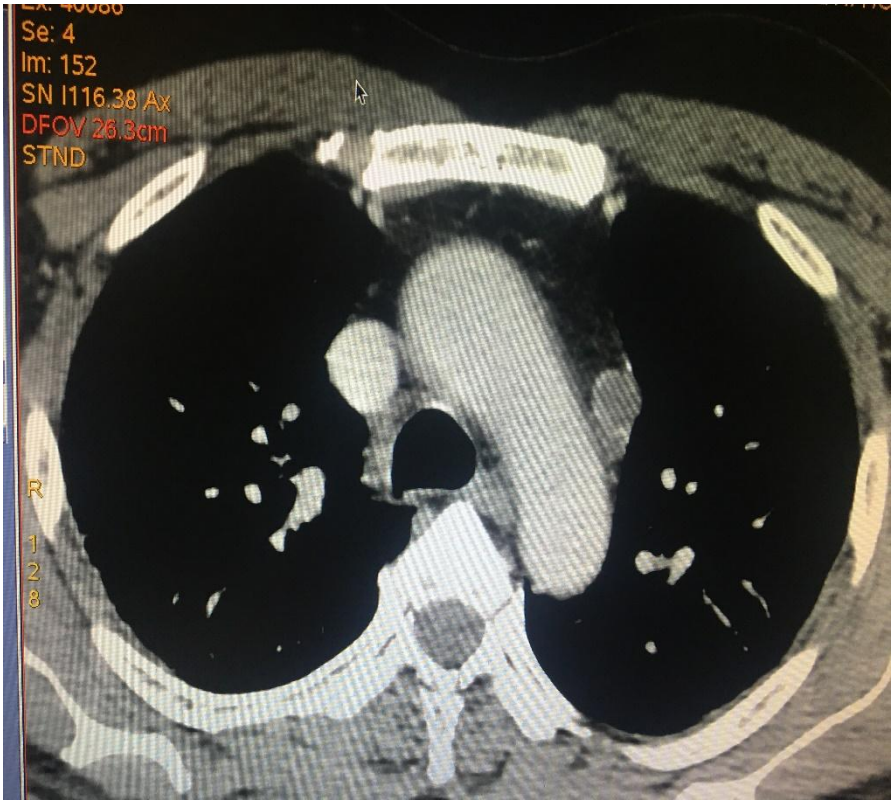


## Discussion

Compared with other organs of the body, including the lungs, liver, and brain, soft tissue is a rare site for metastasis in testicular cancer. For all solid tumours, incidence of soft tissue metastasis is low. Metastases to soft tissue usually are detected in patients with advanced disease; they rarely occur in a primary unknown tumour. Furthermore, it can be the source of diagnostic confusion with a soft tissue sarcoma. It usually is seen as a manifestation of relapse in advanced cancer.

The most commonly reported primary malignancies to result in soft tissue metastasis are lung, kidney, and colon carcinoma, but only five cases of soft tissue metastases from testicular cancer have been reported. Four of the patients had seminoma histology and only one patient had immature teratoma . Plaza et al. reported the abdominal wall, back, thigh, chest, and shoulder were commonly affected sites in the majority of patients with soft tissue metastasis in solid malignancies.

Soft tissue metastases frequently present with a painful mass, which is distinct from primary sarcomas in which the mass often is painless. In our patient he had a painful mass, in the left forearm. Hence history of pain can be useful feature to distinguish between primary sarcoma and metastasis. Though cause of pain in soft tissue metastasis is not known, it may due to involvement of vasa nervosum, as metastasis is primarily by haematogenous route.

The treatment strategy in metastasis of testicular cancers is markedly different because testicular tumours are more chemo sensitive compared with primary soft tissue sarcomas. In soft tissue metastasis, treatment options include observation, radiotherapy, chemotherapy, and excision. Excision may be indicated for selected patients with isolated soft tissue metastases, especially after a long disease free interval. Our patient was treated with wide excision because of isolated soft tissue metastasis.

This is the fifth reported case of a testicular seminoma metastasizing to soft tissue. Our patient highlights the importance of distinguishing soft tissue metastasis from primary soft tissue sarcoma particularly who present with painful mass.

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