Letter to the Editor

Inguinal lymphnode metastatic testicular seminoma: A case report and review of literature

Sir,

Testicular cancer comprises of 1-2% of the total male cancers. Testicular seminoma is the most common germ cell tumor affecting the testis comprising 40-45%. Inguinal metastases in case of testicular seminoma are a rare occurrence. Inguinal and/or scrotal surgery may predispose to inguinal metastases due to altered lymphatic drainage. We report an unusual case of inguinal metastatic classical testicular seminoma following radical orchidectomy.

A 30-years-old male presented with a right inguinal mass of 5 months duration. His medical history revealed that he had undergone an orchidectomy for right testicular mass one and a half years ago, which histopathologically proved to be a classical seminoma testis. He did not take any kind of adjuvant treatment thereafter. His clinical examination revealed a right scrotal orchidectomy scar and right inguinal nodal mass of 10 × 8 cm size. Rests of the clinical findings were unremarkable. His investigations revealed normal values of human chorionic gonadotropin (β-hCG), alphafetoprotein (AFP), and lactate dehydrogenase (LDH). His staging CT scan of thorax, abdomen, and pelvis [Figure 1] revealed only a 7.8 × 4 cm sized conglomerated nodal mass in the superficial right inguinal region with no evidence of mediastinal or para-aortic lymphadenopathy. Right orchidectomy status was also confirmed. FNAC of the right inguinal lymphnode dissection was done thereafter. The histopathology confirmed to be a case of inguinal metastatic classic seminoma testis 6 × 5 cm with extracapsular spread to the surrounding adipose tissue (pN3 disease according to AJCC classification 7th edition 2010) [Figure 2]. Adjuvant chemotherapy in form of 3 cycles of PEB (cisplatin, etoposide, and bleomycin) was instituted considering Stage IIC (pTxN3M0) seminoma testis in a good risk patient according to the NCCN 2011 guidelines. There are no signs of recurrence as confirmed by CT scan and tumor markers. Patient is fine when last seen 3 months ago.

Testicular cancer comprises of 1-2% of the total male cancers. Testicular seminoma is the most common germ cell tumor affecting the testis comprising 40-45%. Histologically, it can be subdivided into classic, anaplastic, and spermatocytic types. Usually, the testicular lymphatics drain along the gonadal vessels to the retroperitoneal nodes, which are located between the lower thoracic and lumbar vertebrae, including the renal hil and around the inferior vena cava and the aorta. The lymphatics that accompany the testicular vessels exit the testis through the inguinal ring to the retroperitoneal para-aortic lymph nodes following typical patterns of spread according to the side of primary tumor. Involvement of the iliac and inguinal nodes can occasionally occur in a secondary retrograde fashion, usually when there are bulky retroperitoneal metastases.

Primary involvement of the iliac and inguinal nodes is rare and associated with tumor extension in the epididymis, breaching of the tunica vaginalis through to the scrotal wall or extension to the vas deferens. Direct inguinal metastases are also reported as a result of previous inguinocrotal surgery as in our case.

Following the surgery where the testicular lymphatics are damaged or disrupted as a result of dissection of the spermatic cord during orchidopexy, orchidectomy, hydrocele repair, varicocelectomy or hernia repair, lymphatics seek new collateral vessels for drainage. Injured lymphatics from scrotal incisions reanastomose with the testicular lymphatics and can, therefore, provide a direct route of spread to the inguinal nodes.

In patients with a prior history of orchidopexy or scrotal surgery who have a testicular tumor, the incidence of inguinal metastases...
The low incidence of inguinal lymph node metastasis, morbidity involvement of the inguinal nodes as a result of altered guidelines 2011 classification 7th edition 2010 seminoma testis and gave 10%.[7] Daugaard et al. evaluated the incidence of inguinal lymph node metastases in 695 patients with stage I testicular cancer.[6] Two percent of patients developed inguinal node metastasis. Non-seminomatous GCTs more frequently invaded inguinal lymph nodes than seminoma. The routine management of the inguinal lymphatics (palpable or not) in patients with testicular tumors and a previous history of inguinal or scrotal surgery remains controversial as a result of insufficient data.[4] Prophylactic inguinal lymphadenectomy is rarely mentioned in the literature. In some series, patients have been found to have positive inguinal nodes with no retroperitoneal lymphadenopathy, supporting the need to perform routine ipsilateral inguinal lymphadenectomy, even when the retroperitoneal nodes are clear.[4,8] Wheeler et al. advocated ipsilateral inguinal and bilateral retroperitoneal node dissection as the primary therapy for non-seminomatous testicular tumor with a previous history of scrotal and inguinal procedures.[4] Another series, in which 20 cases of testicular tumor and previous scrotal surgery were presented, failed to document the incidence of inguinal lymphadenopathy.[9] They concluded that additional treatment to the inguinal nodes was not required, but most of their patients underwent immediate radiation therapy or chemotherapy with none undergoing groin dissection. The true incidence of inguinal metastases in their study is, therefore, unknown. It was suggested that failure to perform prophylactic inguinal node dissection does not adversely affect patient survival and regular groin palpation and dissection of any suspicious lymph nodes was recommended. If positive, cisplatinum, vinblastine, and bleomycin chemotherapy is given. Mianne et al. also suggested that prophylactic ipsilateral inguinal dissection is not necessary in patients with non-seminomatous testicular tumors with a history of inguinal or scrotal surgery, owing to the efficacy of primary and secondary chemotherapy.[10] However, for testicular seminoma, they advocated additional inguinofemoral radiotherapy. The low incidence of inguinal lymph node metastasis, morbidity rate following radical ilioinguinal dissection, the accessibility of the inguinal nodes to follow-up examination, and the availability of highly successful multimodal therapy make expectant management of the clinically negative groin an attractive alternative.

A diagnosis of inguinal node metastases is usually made by an excision biopsy of the nodes. Therefore, we performed an inguinal lymph node dissection to obtain a pathological specimen; staged patient as IIC (pT2N3M0, AJCC classification 7th edition 2010) seminoma testis and gave 3 cycles of PEB chemotherapy according to the NCCN guidelines 2011 (good risk candidate). Inguinal lymph node metastases from testicular cancer are rare. A history of inguinal or scrotal surgery may predispose involvement of the inguinal nodes as a result of altered patterns of lymphatic drainage. The routine management of inguinal lymphatics (palpable or not) in patients with testicular tumors and a previous history of inguinal or scrotal surgery remains controversial, with no consensus amongst those treating these patients. During radical inguinal orchidectomy, the surgeon should be careful to minimize the handling of the testis and ensure high ligation of the spermatic cord up to the internal inguinal ring to reduce the risk of inguinal lymph node metastasis.

### Abbreviations

Computed tomography (CT), Germ cell tumor (GCT), American Joint Committee On Cancer (AJCC), National Comprehensive Cancer Network (NCCN)

### Consent

Written informed consent was obtained from the patient for publication of this case report and any accompanying images.

**Shishir Shah**

Department of Surgical Oncology, Gujarat Cancer and Research Institute, Civil Hospital Campus, Ahmedabad, Gujarat, India

**Correspondence to:**
Dr. Shishir Shah, E-mail: shishir_shah60@yahoo.co.in

### References


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![Figure 1: CT scan pelvis showing right inguinal metastatic nodal mass](image1.png)

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![Figure 2: Histology of the excised right inguinal nodal mass showing the typical picture of classic seminoma](image2.png)

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