

Metastatic seminoma with cervical lymphadenopathy as initial presentation and without retroperitoneal or mediastinal lymphadenopathy

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ABSTRACT

Testicular germ cell tumors usually present as painless scrotal swelling. In rare cases these tumors may present with cervical lymphadenopathy as initial presentation. Lymphatic metastases from testicular germ cell tumor tend to be contiguous, spreading from the abdomen into the chest and finally into the neck. We present a case of testicular seminoma with cervical lymphadenopathy as initial presentation and without retroperitoneal or mediastinal lymph node metastases, which is extremely rare.

Key words: seminoma, germ cell tumor, cervical lymphadenopathy, retroperitoneal lymphadenopathy

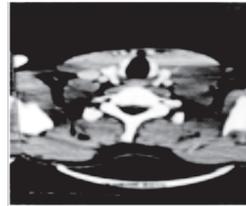
INTRODUCTION

Testicular cancers, although represents only one percent of all malignancies in men, are the most common neoplasms in boys and young adults in the age group of 15 to 34 years.¹ Germ cell tumors account for 98% of all testicular malignancies.¹ In testicular carcinoma, the incidence of neck metastases range from 4.5 to 15% and in an estimated 5% of these cases, a neck mass is the initial presentation.^{2,3} Lymphatic metastases from testicular germ cell tumors tend to be contiguous, spreading from abdomen into the chest and finally into the neck.⁴ We report an unusual case of metastatic seminoma that initially manifested as a neck mass, with an occult primary in left testis and without any other metastatic disease (particularly in the retroperitoneum). Although the presence of cervical lymph node metastases is believed to be a marker for advanced disease, even advanced testicular cancer is thought to be curable with appropriate therapy.⁵ Overall cure rates for germ cell tumors are in the range of 90 to 95%, but maintenance of the cure rates requires structured and timely approaches to therapy.⁶

CASE REPORT

A 42 years old man presented with complaint of swelling in left side of neck since ten days. The past medical history was not significant.

Fig.1. CT scan of neck showing enlarged lymph node on left side

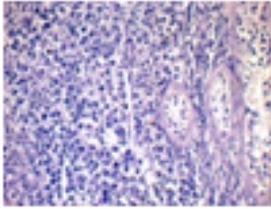


On examination, vitals were within normal limits. Local examination revealed a swelling of size 4 X 5 cm at left side of neck, below the level of thyroid cartilage, anterior to sternocleidomastoid muscle. Swelling was firm, nontender, immobile, and deep to left sternocleidomastoid muscle. Indirect laryngoscopy establishes oropharynx, hypopharynx, and larynx normal. Hemogram was normal. Chest radiograph and ultrasonography (USG) of abdomen, upper gastro endoscopy was normal. Contrast enhanced computer tomography of neck showed a well defined minimally enhancing hypodense lesion along posterior distal one third of left sternocleidomastoid muscle displacing and compressing the left jugular vein with few subcentimetric cervical lymph nodes.

CT morphology suggested possibilities of fibroma or metastases. Biopsy of the neck swelling revealed *granulomatous lymphadenitis*. Immunophenotyping of the specimen was reported as metastatic germinoma with florid sarcoid like granulomatous response (negative for LCA,CK, CD 20, CD 30, ALK and strongly positive for CD 117). Serum AFP and Beta HCG were normal; LDH was mildly elevated. USG of scrotum revealed an

enlarged left testis. Biopsy of the testicular swelling was reported as seminoma. Thus the diagnosis of germ cell tumor of testis with cervical lymph node metastases was confirmed.

Fig.2.High magnification view showing seminoma cells arranged in sheets and columns by fine fibrous trabeculae associated with a lymphocytic infiltrate along with intratubular germ cell neoplasia (on right side)



CECT of thorax and abdomen was normal with no mediastinal or retroperitoneal lymphadenopathy. Left high inguinal orchidectomy was done. This was followed by four cycles of chemotherapy with EP regimen (cisplatin- 20 mg/m² on days 1-5 and etoposide- 100 mg/m² on days 1-5). Neck swelling completely disappeared by the end of two cycles of chemotherapy. Two more cycles were given and CECT neck, thorax, abdomen and pelvis at the end of four cycles were normal. The patient is on regular follow up.

DISCUSSION

Testicular germ cell tumors have two broad categories: seminomas and nonseminomatous germ cell tumors (NSGCTs). Seminomas account for approximately 60% of all testicular germ cell tumors.⁷ Its incidence is highest among men aged 30 to 39 years, and it declines steadily with advancing age.⁷ When a neck mass is found to be a metastatic germ cell tumor, it is usually in the setting of a known primary tumor and other known metastatic disease, particularly beneath the diaphragm.⁸ Although some authors have estimated that as many as 5% of germ cell tumors initially manifest as a neck mass, case reports of such a phenomenon are rare.^{2,3} All germ cell tumors have a propensity for lymphatic spread but NSGCTs are more likely to demonstrate hematogenous spread.^{4,9} Both sided testicular tumors spread first to the retroperitoneal nodes and then move superiorly along the thoracic duct.

Lymphatic metastases tend to be contiguous, spreading from the abdomen into the chest and finally into the neck.⁴

Treatment strategies for advanced germ cell tumors continue to evolve. The treatment plan depends on the histology of the tumor (seminoma vs. NSGCT), the site of metastasis, and serum concentrations of tumor markers.^{5,6,10} Once cervical lymph nodes are involved, the tumor is classified as stage 3 and initial treatment is generally chemotherapy.

The management of seminoma is less clear and may be more controversial than that for NSGCT.¹¹ In seminoma, tumor markers may be negative at presentation (as was the case with our patient) and there fore may not be available to guide therapy. Also, seminomas tend to be more radiosensitive than are NSGCTs. Consequently, post chemotherapy management of residual masses (as studied in the retroperitoneum) might include radiotherapy, observation, or surgical resection; no studies address cervical seminoma specifically. However, researchers who did consider seminoma together with NSGCT in the more general category of germ cell tumors continue to recommend surgical resection of residual neck masses following chemotherapy.^{2,12}

CONCLUSION

It is imperative to keep in mind the possibility of metastatic seminoma while dealing with neck node metastases in an adult male along with other differential diagnoses like metastatic carcinoma, lymphoma or amelanotic melanoma.

AUTHOR NOTE

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REFERENCES

1. National Cancer Institute. SEER Stat version 4.1: SEER cancer incidence public use database, 1973-1998. Bethesda, Md.:National Cancer Institute, 2001.
2. See WA, Laurenzo JF, Dreicer R, Hoffman HT. Incidence and management of testicular carcinoma metastatic to the neck. *J Urol*. 1996 Feb;155(2):590-2.
3. Zeph RD, Weisberger EC, Einhorn LH, Williams SD, Lingeman RE. Modified neck dissection for metastatic testicular carcinoma. *Arch Otolaryngol*. 1985 Oct;111(10):667-72.
4. Wood A, Robson N, Tung K, Mead G. Patterns of supradiaphragmatic metastases in testicular germ cell tumours. *Clin Radiol*. 1996 Apr;51(4):273-6.
5. Shahidi M, Norman AR, Dearnaley DP, Nicholls J, Horwich A, Huddart RA. Late recurrence in 1263 men with testicular germ cell tumors. Multivariate analysis of risk factors and implications for management. *Cancer*. 2002 Aug 1;95(3):520-30.
6. Raghavan D. Testicular cancer: maintaining the high cure rate. *Oncology*. 2003 Feb;17(2):218-28.
7. McGlynn KA, Devesa SS, Sigurdson AJ, Brown LM, Tsao L, Tarone RE. Trends in the incidence of testicular germ cell tumors in the United States. *Cancer*. 2003 Jan 1;97(1):63-70.
8. Lynch DF Jr, Richie JP. Supraclavicular node biopsy in staging testis tumors. *J Urol*. 1980 Jan;123(1):39-40.
9. Bhalla RK, Jones TM, Errington D, Roland NJ. Metastatic testicular seminoma—a case report. *Auris Nasus Larynx*. 2002 Apr;29(2):219-22.
10. Law TM, Motzer RJ, Bajorin DF, Bosl GJ. The management of patients with advanced germ cell tumors. Seminoma and nonseminoma. *Urol Clin North Am*. 1994 Nov;21(4):773-83.
11. Fleshner N, Warde P. Controversies in the management of testicular seminoma. *Semin Urol Oncol*. 2002 Nov;20(4):227-33.
12. Lee JT, Calcaterra TC. Testicular carcinoma metastatic to the neck. *Am J Otolaryngol*. 1998 Sep-Oct;19(5):325-9.