CASE REPORT

Testicular Choriocarcinoma: diagnosed on cervical lymph node biopsy

Nadeem Zia Abbasi,[1] Zainab Zahur,[2] Abdul Samad Sheikh,[3] Amjad Aziz Khan,[4] Fayyaz Ahmed,[5] Khalid Hussain Memon,[6] Furqan Ali,[7] Asif Jeilani,[8] Tetheer Fatima,[9] Kamran Khan,[10] Attia Gul[11]

Abstract

Choriocarcinoma is a very rare germinal testicular tumour and in literature its incidence has been reported to be 0.3% of all germinal testicular tumours. An important tumour marker is serum ß-hCG which not only helps in establishing diagnosis but also in assessing response to chemotherapy. In this study we present a case of testicular choriocarcinoma, who presented with abdominal pain, cough, generalized weakness and left sided cervical mass. Incisional biopsy of cervical mass was performed. Histopathology revealed metastatic choriocarcinoma. Serum ß-hCG levels were 1227 ng/mL. Patient received intravenous cycles of PEB (cisPlatin, Etoposide, Bleomycin) chemotherapy but he had progressive disease both radiologically and on tumour marker monitoring. He was planned for salvage chemotherapy but was lost to follow up there after. It is concluded that in males, choriocarcinoma carries a very dismal prognosis and a very poor response to chemotherapy and radiotherapy; surgery has no role in the management.

Keywords: Choriocarcinoma, Male, Serum ß-hCG, Chemotherapy, Prognosis.

Introduction

Choriocarcinoma in males is considered to be a highly malignant variant of teratoma. The testes are the most common primary site for this lesion in males, although primary tumours of the mediastinum, subcutaneous tissue, pancreas and retroperitoneal areas have also been reported. Like other germ cell tumours (GCTs), choriocarcinoma typically affects young men but unlike other germ cell tumours, patients of choriocarcinoma of the testes do not usually present with local symptoms and the prognosis of these patients is very dismal.

In most reports, the tumour responds poorly to radiation and chemotherapy and carries a high mortality rate. Surgery is usually limited to tissue diagnosis.[1] Choriocarcinoma recapitulates placental tissue development. For unknown reasons, it metastasizes early via haematogenous routes to the lung, liver, and brain.[1,2]

In the literature review of 10,000 cases of testicular germ cell tumours, only 54 (0.5%) cases of pure choriocarcinoma were reported. The peak incidence was found in men between the ages of 20-30 years.[3]

Usually the initial presenting symptoms are from metastases, or symptoms from elevated levels of ß-hCG, although the patient may present with painful testicular swelling. Serum ß-hCG levels are usually markedly elevated in pure choriocarcinoma. Syncytiotrophoblastic cells are responsible for the production of ß-hCG. Serun ß-hCG levels are not only helpful in establishing the diagnosis but can also help in assessing response to treatment.

We describe an unusual case of metastatic choriocarcinoma in a young male diagnosed on cervical lymph node biopsy and the literature review of this rare disease.

Case report

A 27 year old male presented with 3 months history of generalized fatigue, weight loss, fever, cough and abdominal pain. Patient was non-smoker and non addict. There was no family history of any malignancy in the family. He had never received radiation to any part of body and he did not have any known congenital chromosomal abnormality or mumps in childhood. Patient was completely oriented in time, space and person with good performance status (ECOG-0).

He had received symptomatic treatment from different general practitioners during the course of his illness but his symptoms did not improve. Patient sought advice from a surgeon and a CT scan of abdomen was done that showed massive abdominal lymph adenopathy. Meanwhile he developed left sided cervical lymphadenopathy along with severe backache. His respiratory symptoms also aggravated with time.

Cervical lymph node was biopsied and specimen was sent for histopathology. It was reported as "metastatic malignant neoplasm suggestive of Choriocarcinoma".

[1-4,6-11]Department of Oncology, Institute of Nuclear Medicine, Oncology and Radiotherapy (INOR), Abbottabad, [5]Bio-Sciences Division, PAEC HQ, Islamabad.
Correspondence: Nadeem Zia Abbasi. Email: nzabbasi@hotmail.com

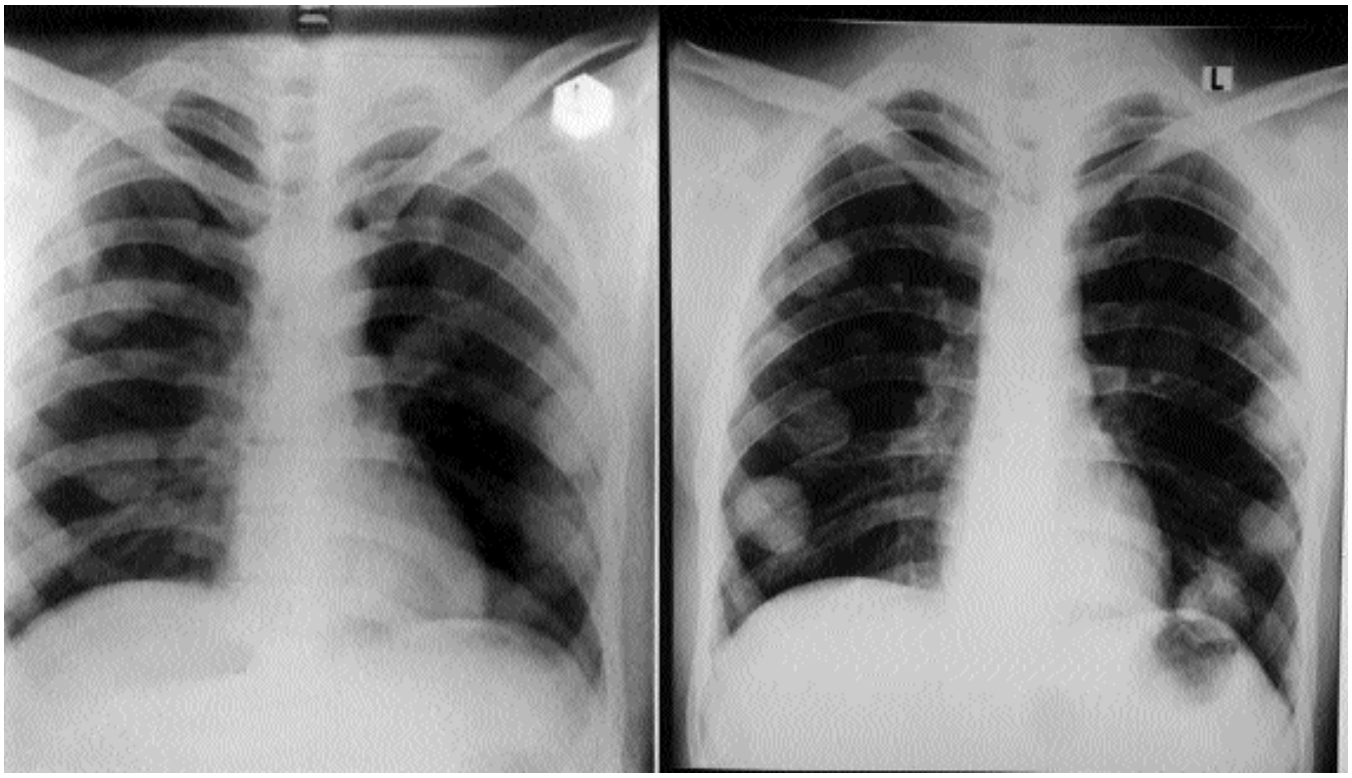

Figure: Pre & post chemotherapy X-ray chest showing progressive bilateral coin shaped metastasis.

Immunohistochemical stain for ß-hCG was done on histopathology specimen which was equivocal.

Patient was referred to an oncologist for further management. After detailed history and physical examination, his metastatic workup was done. On physical examination, he had hard slightly enlarged asymptomatic left testes, left cervical lymphadeonopathy, hepato-splenomagaly, several palpable masses within the abdomen and scrotal swelling. His haematological and biochemical profiles were within normal limits. His chest radiograph showed multiple coin shaped lesions which were suggestive of metastasis. Abdominal and pelvic ultrasonography also showed para aortic lymphadenopathy. Bone scan was suggestive of metastatic disease in spine. His serum ß-hCG levels were 1227ng/mL.

Patient was given IV cycles of cisPlatin, Etoposide, Bleomycin (PEB) chemotherapy but he had progressive disease clinically and radiologically (Figure) with persistently elevated tumour markers. The patient was planned for salvage chemotherapy but was lost to follow up there after.

Discussion

Non-seminomatous germ cell tumours are highly aggressive malignant tumours of the testes. Most of the patients present with metastatic disease. Histologically, approximately 70% of the non-seminomatous germ cell tumours are composed of more than one germ cell components (mixed germ cell tumours).[4] These various components include embryonal carcinoma, seminoma, yolk sac tumour and teratoma; choriocarcinoma is relatively rare. Less than 8% of the testicular germ cell tumours contain a component of choriocarcinoma, and pure choriocarcinoma accounts for only 0.3% of the primary testicular germ cell tumours.[5]

The common presentation of testicular tumours is testicular swelling along with systemic symptoms, if metastatic. As choriocarcinoma in males has a very high propensity to spread haematogenously, it usually presents with systemic symptoms, like haemoptysis in case of respiratory involvement, abdominal pain and haematemesis in GI involvement and bone pains in case of skeletal metastasis. Our case was exceedingly unusual with cervical lymph node enlargement as initial presentation.

The diagnosis in this rare case was very difficult and involved thorough clinical evaluation, serum ß-hCG levels and most importantly histopathological examination of

biopsy specimen. Choriocarcinoma in males is an extremely aggressive disease with very dismal outcome and poor prognosis. Its syncytiotrophoblastic cells contain plasma chorionic gonadotrophin (ß-hCG), which is used as a tumour marker for diagnosis, grading and evaluation of response to treatment.

In most cases these tumours respond poorly to radiotherapy and chemotherapy and carry a high mortality rate. Triple drug chemotherapy gives an average survival of 3-4 months, the longest survival on record being 17 months[6] in case of mediastinal choriocarcinoma. Surgery is usually limited to tissue diagnosis.

Standard chemotherapy for poor-risk and some good-to-moderate risk patients include IV cycles of BEP (i.e., bleomycin, etoposide, cisplatin). Other chemotherapeutic agents which have shown some activity in first line treatment or as salvage therapy in these cases include vinblastine and ifosfamide.

These tumours, although rare should be considered in the differential diagnosis of cervical masses.

References

1. Mostofi FK, Sesterhenn IA. Anatomy and pathology of testis cancer. In: Vogelzang N (ed.) Comprehensive Textbook of Genitourinary Oncology. Baltimore, MD: Williams and Wilkins; 1996; pp 956-8.
2. Chen X, Xu L, Chen X, Teng X, Zheng S. Testicular choriocarcinoma metastatic to skin and multiple organs. Two case reports and review of literature. J Cutan Pathol 2010; 37: 486-90.
3. Ramon y Cajal S, Pinango L, Barat A, Moldenhauer F, Oliva H. Metastatic pure choriocarcinoma of the testis in an elderly man. J Urol 1987; 137: 516-9.
4. Krag Jacobsen G, Barlebo H, Olsen J, Schultz HP, Starklint H, Søgaard H, et al. Testicular germ cell tumors in Denmark 1976-1980. Pathology of 1058 consecutive cases. Acta Radiol Oncol 1984; 23: 239-47.
5. Ulbright TM, Mahal BA, Young RH. Tumors of the testis, adnexa, spermatic cord, and scrotum. In: Rosai J (ed). Atlas of Tumor Pathology. Washington, DC: Armed Forces Institute of Pathology; 1999.
6. Martini N, Golbey RB, Hajdu SI, Whitmore WF, Beattie EJ Jr. Primarymediastinal germ cell tumours. Cancer 1974; 33: 763-9.