

## Spontaneous Massive Hemoperitoneum secondary to bleeding of a Hepatic Metastasis from a Testicular Germ Cell Tumor-An Unusual presentation

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**Abstract:** The presence of blood in the peritoneal cavity that is unrelated to any trauma is called spontaneous hemoperitoneum. Hepatic metastasis associated with hemoperitoneum due to spontaneous rupture is rare. Herein, we report an uncommon case of spontaneous massive hemoperitoneum due to rupture of liver metastasis in a male patient with germ cell tumor of testis.

**Keywords:** Hemoperitoneum, Germ cell Tumor, Teratoma, Retroperitoneal lymphadenopathy.

### INTRODUCTION:

Neoplasms of the testis comprise a morphologically and clinically diverse group of tumors, 95% of which are Germ cell tumors (GCT). GCTs are broadly categorized as seminoma and nonseminoma (NSGT) owing to differences in natural history and treatment. GCTs are relatively rare malignancies, accounting for 1% to 2% of cancers among men. Approximately 90% of germ cell tumors arise in testis and 2% to 5% are extragonadal (the retroperitoneum and mediastinum are the most common sites) [1]. Hepatocellular carcinoma and hepatic adenoma are the most common causes of spontaneous hemoperitoneum of liver origin with 10 to 25% of cases hepatic adenomas presenting with spontaneous intraperitoneal hemorrhage [2, 3]. But hepatic metastasis from a testicular tumor presented with spontaneous hemorrhage is very rare.

### CASE PRESENTATION:

A 23-years-old young boy presented to emergency department with complaints of pain in abdomen (10 days) and generalized weakness for 1 month duration. There was a past history of right radical orchidectomy for testicular tumor. There was no history of trauma to abdomen, and no other significant past medical or surgical history. General physical examination revealed a pulse of 102/min, blood pressure of 100/60 mm Hg. Patient was grossly anemic. There were no clinically palpable lymph nodes. Chest was clinically normal. Abdomen was distended, tender to palpation all over, rebound tenderness was absent, and bowel sounds were sluggish. Local examination revealed a right inguinal scar, absent right testicle. USG of abdomen was done that showed blood in peritoneal

cavity, a retroperitoneal lymph node mass and a hypodense lesion, suggestive of metastatic deposit, in right lobe of liver. Abdominocentesis revealed blood in peritoneal cavity. CECT of the abdomen showed a large retroperitoneal lymph node mass with focal areas of necrosis and a metastatic deposit in segment 6 of liver as shown in figure 1.



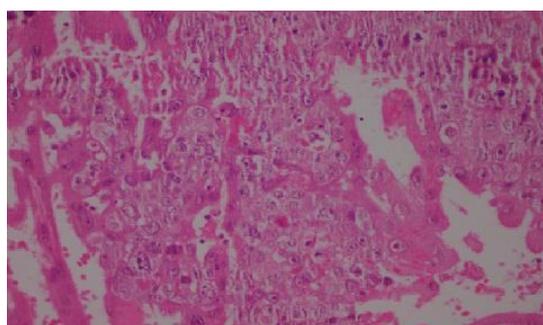
**Fig 1: CECT Abdomen showing Retroperitoneal Lymph node mass with areas of necrosis and Metastatic deposit in segment-6 of liver**

Exploratory laparotomy revealed about 2.5 litres of blood with multiple clots in the peritoneal cavity with a large retroperitoneal mass extending from diaphragm above to pelvic brim below as shown in figure- 2. There was a raw area 1×1.5 cm, bleeding actively, on the inferior surface of right lobe of liver with palpable underlying nodular mass.



**Fig. 2: Retroperitoneal lymph node mass**

Following a thorough peritoneal lavage, biopsies were taken from both bleeding liver lesion as well as retroperitoneal lymph node mass. Hemostasis was achieved by suturing the raw areas with catgut over gel foam. Abdominal drain was placed and wound closed back. Postoperative tumor marker level was  $\beta$ -HCG- 7700mlU/ml (normal value <5mlU/ml),  $\alpha$ -Feto protein - 942.1ng/ml (normal value 0-10ng/m), LDH- 1190U/L (normal value 230-460U/L). Histopathology of both the liver lesion and retroperitoneal lymph node showed metastatic deposits of mixed germ cell tumor as shown in figure -3.



**Fig 3: Liver biopsy showing features of mixed germ cell tumor (H &E X 400)**

#### DISCUSSION:

Testicular cancer is the most common solid malignancy in men ages 15 to 35 years of age [4]. Although painless swelling of testis is the most common presentation of the testicular tumor but presentation can be unusual at times. The usual presentation of a testicular tumor is a nodule or painless swelling of one gonad. In approximately 10% of patients, the presenting manifestations may be due to metastases and include a neck mass (supraclavicular

lymph node metastasis); respiratory symptoms, such as cough or dyspnea (pulmonary metastasis); gastrointestinal disturbances, such as anorexia, nausea, vomiting, or hemorrhage (retro duodenal metastasis); lumbar back pain (bulky retroperitoneal disease involving the psoas muscle or nerve roots); bone pain (skeletal metastasis); central and peripheral nervous system manifestations (cerebral, spinal cord, or peripheral root involvement); or unilateral or bilateral lower-extremity swelling (iliac or caval venous obstruction or thrombosis). Testicular tumor has a high metastatic potential. Liver could be affected by metastasis from testicular germ cell tumor (13%); however, massive hemoperitoneum due to hepatic metastasis of testicular tumor is unusual and only few cases have been reported in the literature. The complications occurring in metastatic hepatic lesions are exceptional. This can be explained by higher degree of fibrosis and low degree of invasion of secondary hepatic lesions [5]. Delay in diagnosis of 1 to 2 months or more is not uncommon in these patients and seems to be related directly to patient factors such as ignorance, denial, and fear as well as physician factors such as misdiagnosis. Almost half of patients present with metastatic disease [6]. Patients who present with signs and symptoms from metastatic disease can be difficult to diagnose. These patients may be subjected to inappropriate treatment, diagnostic tests and unnecessary surgery with subsequent delay in definitive therapy. Liberal use of diagnostic armamentarium can reduce the incidence of misdiagnosis and can help to plan appropriate management for each patient.

#### CONCLUSION:

Testicular tumor being the most common solid malignancy in men aged 15 to 35 can have varied presentation of both primary as well as metastatic disease. Spontaneous intraperitoneal hemorrhage is a diagnostic and therapeutic challenge for the clinician and the radiologist. A good history taking and clinical examination when augmented by radiological imaging studies makes the diagnosis easy. The management is guided by the stage of the disease. Bleeding metastatic deposit can be controlled by suturing over gel foam.

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