

Hemoperitoneum secondary to bleeding of a hepatic metastasis of testicular carcinoma

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KEY WORDS

hemoperitoneum ► packing ► choriocarcinoma

ABSTRACT

Testicular cancer is the most common type of cancer among young patients. At the moment of diagnosis, between 30% and 50% of them have developed metastases, which affect retroperitoneal lymph nodes and lungs especially. Hepatic compromise is rare and is associated with poor prognosis. Besides this, hepatic lesions can complicate with necrosis and overgrowth, a phenomenon that is mainly seen in primary lesions. Furthermore, bleeding of secondary lesions is very uncommon. We present a case of a patient with massive hemoperitoneum secondary to rupture of hepatic metastatic lesions of a primary testicular tumor.

CASE REPORT

A thirty-year-old male patient without comorbidities presented ambulatory for right testis enlargement, lower back pain, weight loss amounting to 4-kilograms, and a cough with bloody expectorant, during the last 2 months. He underwent testicular and abdominal ultrasonography, which revealed an atrophic right testis with an expansive, solid-cystic tumoral process with multiple calcifications (Fig. 1) and a retroperitoneal mass without focal hepatic lesions, respectively. Also tumoral markers were solicited whose results were LDH 629 UI, HCG 465728 mIU/ml, and AFP 1.4 ng/ml. Due to this, staging was carried out with chest, abdominal and pelvis CTs (Figs. 2, 3), which showed multiple hyperdense bilateral pulmonary nodules of a maximum diameter of 4-centimeters, three nodular images in hepatic segments IV and V, a heterogeneous retroperitoneal mass of a maximum diameter of 8-centimeters, and a mesenteric mass of a maximum diameter of 5-centimeters. The study was concluded with a brain CT that did not reveal brain metastases.



Fig. 1. Testicular Ultrasound.

Radical right orchiectomy was performed and the biopsy reported choriocarcinoma in 50% of the sample associated to yolk sac tumor in the remaining 50%. (Figs. 4 and 5)

Nine days after orchiectomy, the patient started chemotherapy with BEP (Bleomicine, Etoposide, and Cisplatin). During the first day of treatment he developed intense diffuse abdominal pain, which prompted the discontinuation of chemotherapy. Physical examination showed a distended and sensitive-to-touch abdomen, with signs of peritoneal irritation. The patient underwent an ultrasound-guided diagnostic puncture, which showed hemoperitoneum. A hematocrit control was performed and revealed a fall from 29 to 16%; 3-units of red blood cells were administered prior to the subsequent surgery.

An explorative laparotomy was performed 2-hours later and revealed massive hemoperitoneum (3.5 liters) secondary to active bleeding of hepatic metastasis of segment V; consequently hepatic packing was performed. After 3 days, the packing was removed with no evidence of active bleeding and then he underwent a chemotherapy session. Currently he has completed chemotherapy treatment and has followed the corresponding oncologic control.

DISCUSSION

Testicular cancer is the main malignancy in patients aged from 15 to 35 years old, although its incidence is only 1% considering all tumors of men [1]. It has a high metastatic potential, generating 5.8 metastases/testicular cancer, the highest number among malignant tumors. The liver is one of the organs that could be affected (13%); however, massive hemoperitoneum due to hepatic metastasis rupture of testicular cancer is unusual and only a few cases are reported in the literature [2].

The occurrence of complications in metastatic hepatic lesions is exceptional, which are mainly associated to primary hepatic lesions [3]. This can be explained by a higher presence of fibrosis in secondary hepatic lesions, and a lower vascular compromise and invasiveness of secondary lesions. On the other hand, hepatic cap-

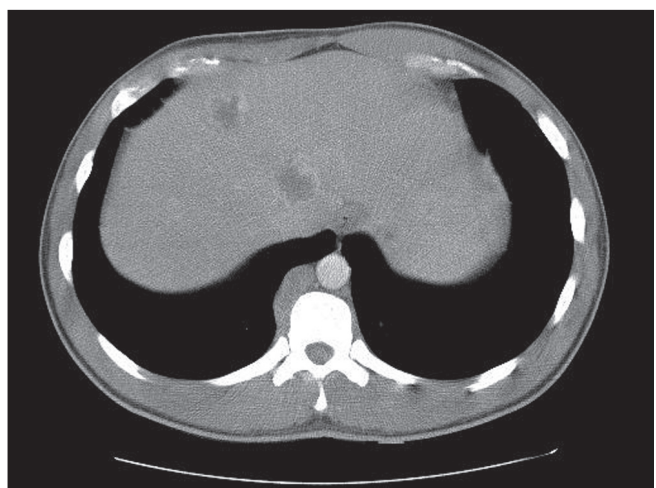


Fig. 2. CT scan with secondary hepatic lesion.

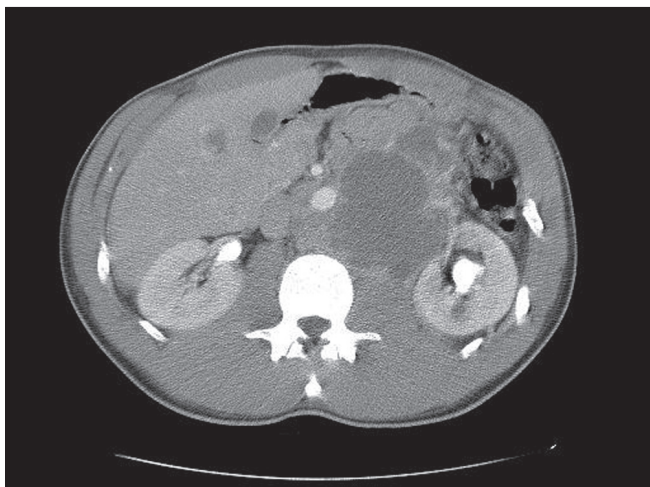


Fig. 3. CT scan with retroperitoneal lesion.

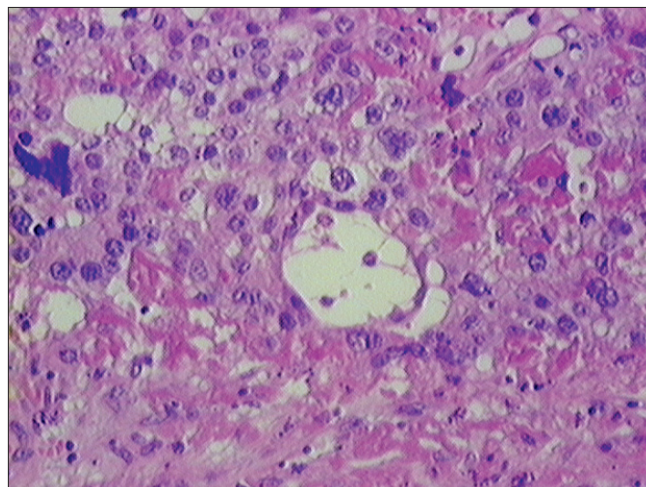


Fig. 4. Choriocarcinoma.

sule compromise is less common in secondary lesions than in hepatocellular carcinoma [4].

Like the other reported cases of hemoperitoneum due to hepatic metastasis rupture of testicular tumors, this complication is more common with aggressive cancers, such as choriocarcinomas, embryonal carcinomas, or mixed carcinomas with any of these two components, as in this patient's histology [5, 6]. On the other hand, hemoperitoneum could occur spontaneously or after chemotherapy. It happens in tumors with high proliferation rates, in which spontaneous necrosis occurs due to vascular invasion or is induced by chemotherapy, with subsequent rupture and hemorrhage [7]. Furthermore, because some coagulation factors are synthesized in the liver, a consumption coagulopathy (CID) and tendency to hemorrhage can be induced when the liver is affected by secondary lesions [8].

Choriocarcinoma has many particular characteristics. Firstly, it is the most aggressive germ cell tumor, which contains cyto- and syncytiotrophoblast. It can disseminate as through lymphatic via hematic; it shows a good response to chemotherapy in spite of metastasis and possesses a 5-years survival rate ranging from 70 to 80%. However, the prognosis is worse if hemorrhagic complications are present [9]. Besides these features, it has a high proliferation rate, invasiveness, vascularization and bleeding tendency as consequence of tumoral necrosis and coagulation disorders.

Hepatic packing is a good option in case of hemoperitoneum due to active hepatic bleeding. It helps to stop the bleeding in a short period of time, to stabilize the patient and to make a second look of the bleeding site. It is well known that in case of metastatic lesions in the liver secondary to primary testis carcinoma, metastasectomy is recommended as part of the treatment. Nevertheless, we believe that this is a more complex approach that requires more time. That explains why we did not choose it as an emergency procedure, and why we do not recommend it in similar situations of metastatic hepatic bleeding.

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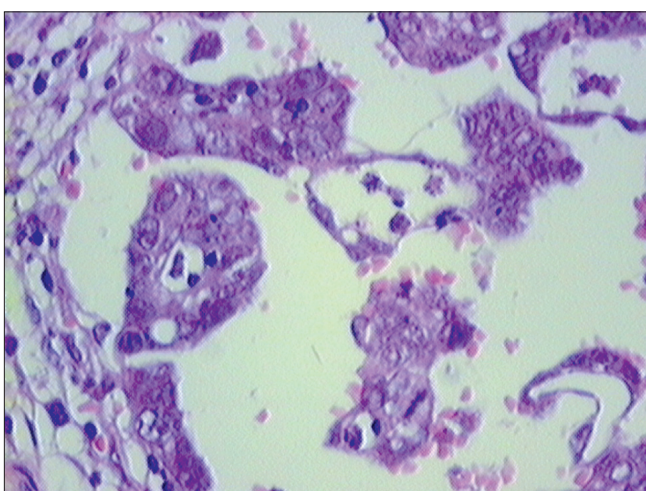


Fig. 5. Yolk sac Tumor.

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