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Seminal vesicles tumor: Rare localization of lymphoma. A case report

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ABSTRACT

A case affected by a seminal vesicles secondary tumor to diffuse large B-cell lymphoma is reported. Seminal vesicles neoplasms are scarce, and they can be classified into primary or secondary. The most common case is their involvement by extension of adjacent tumors, which are clinically nonspecific. In the case presented herein, the patient complained of oliguria, constipation and perineal pain, where imaging methods revealed the growth of both seminal vesicles. Pathological examination revealed infiltration of seminal vesicles by diffuse large B-cell lymphoma. In view of this clinical event, we briefly reviewed literature related to the involvement of seminal vesicles tumor.

Introduction

Seminal vesicles malignant tumors are rare disease that can be classified into primary or secondary, either by extension of adjacent tumors or by metastatic lesions.[1] The delay in their diagnosis dramatically decreases the prospect of recovery.[2]

The most common symptomatology is non-specific and it normally appears in advanced stages of the illness. It includes hematospermia, urinary or gastrointestinal symptoms, perineum pain or acute kidney injury from bilateral ureteral compression.[3] Although imaging methods are used to detect involvement of seminal vesicles,[4] the definite diagnosis needs to be unequivocally confirmed by histopathological and immunohistochemical analysis.[2] Surgery is the mainstay for the treatment of primary tumors, which may be supported with radiotherapy, chemotherapy and hormonal therapy.[3] Nevertheless, in the case of secondary tumors, therapies are mainly focused on the treatment of the primary disease.

Case report

Herein, we report a case of a 66-years old male with involvement seminal vesicles secondary tumor to diffuse large B-cell lymphoma. He was diagnosed with diffuse large B-cell lymphoma, in remission for already one year. He suffered from perineum pain, oligoanuria and constipation during several days. Blood-analysis showed acute kidney injury and computed tomography (CT) suggested bilateral obstructive secondary uropathy (Fig. 1-A) to solid mass, located at the bottom of rectus-bladder sac (Fig. 1-B).

Intravenous contrast CT confirmed the growth of both seminal vesicles, with dimensions for the anteroposterior, transverse and longitudinal axes of 7,2 × 4,5 × 7,7 cm and 6,1 × 4,5 × 7,4 cm, for the right and the left vesicles, respectively (Fig. 1-C). In addition, CT revealed the presence of peritoneal implants and hepatic damaged related to lymphoma.

The histopathological analysis showed plenty of lymphocytes in connection with infiltration of seminal vesicles by diffuse large B-cell lymphoma, while immunohistochemistry resulted positive for CD20, CD79a, CD10, Bcl-2 and Bcl-6 and negative for CD3 (Fig. 2). Therefore, concluding diagnosis was a relapse of diffuse large B-cell lymphoma stage IV-A, being chemotherapy started straightforward, in agreement to convention. After the first cycle of chemotherapy, CT showed size reduction of both seminal vesicles, and a decrease of liver damage and peritoneal implants. After the second cycle, the patient complained from tetraparesis that evolved towards cardiorespiratory arrest. Finally, brain death was detected followed by patient defunction because of severe encephalomyelitis, most likely with a chemical origin.

Discussion

Malignant tumors of the seminal vesicles are uncommon diseases.

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Fig. 1. CT demonstrated bilateral obstructive uropathy (1-A) to solid mass located at the bottom of rectus-bladder sac (1-B). CT revealed growth of both seminal vesicles (1-C).

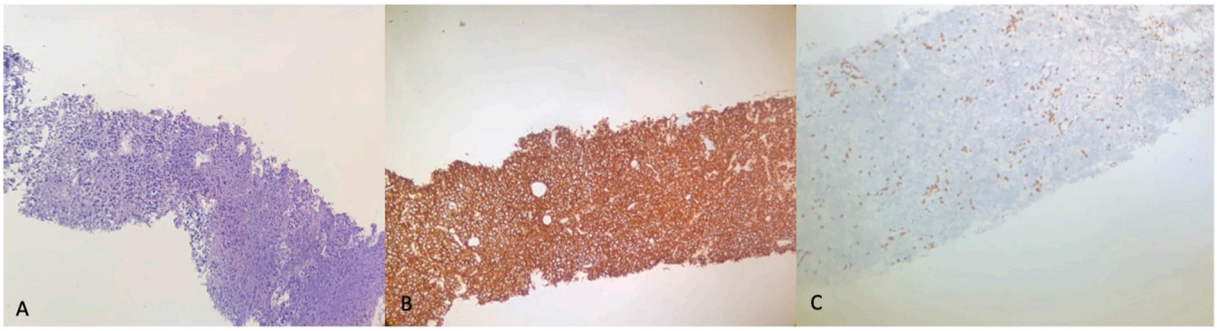

Fig. 2. A: Hematoxylin-eosin stain showed plenty of lymphocytes in connection with diffuse large B-cell lymphoma. B: Immunohistochemical CD20 +. C: Immunohistochemical CD3 -.

Table 1
Immunohistochemistry marks for seminal vesicles cancer.[2]

Immunohistochemistry markers	CEA	CA-125	PSA/PAP	CK7	CK20
Seminal vesicle carcinoma	–	+	–	+	–
Prostate cancer	–	–	+	–	–
Colorectum cancer	+	–	–	–	+
Bladder cancer	+	–	–	+	+

Nevertheless, their knowledge and consideration in the differential diagnosis in patients with symptoms related of seminal vesicles involvement is essential.

Seminal vesicles tumors are classified as primary (carcinoma, sarcoma, lymphoma …) and secondary ones. The most frequent involvement is the invasion by adjacent tumors such as the prostate, bladder or rectum, being primary tumors or metastatic secondary tumors extremely rare.[5]

The present case corresponds to involvement seminal vesicles secondary tumor to diffuse large B-cell lymphoma. The extranodal abdominal involvement to lymphoma is more prevalent and may affect both solid organs and hollow viscus. Conversely, incidence of lymphomas in pelvic organs as bladder, prostate or seminal vesicles tends to be much lower. In particular, the involvement of seminal vesicles by lymphoma is an extremely rare clinical event, being the non-Hodgkin lymphoma the most common situation.[1]

The symptoms are pretty varied and include hematuria, hematospermia, urinary tract infections, pelvic or perineal pain, gastrointestinal symptoms (constipation or rectal urgency), as well as weight loss and fatigue in advanced stage of the disease.[3]

Physical examination should include digital rectal inspection, which can detect the presence of an irregular, hard, immobile mass on top of the prostate. Nonetheless, nearly of 30% of patients lack abnormal findings after this exam.[5]

The first imaging test performed is transrectal ultrasound, to discern whether it is a solid or cystic mass.[5] CT and magnetic resonance imaging provide more accurate information to evaluate the involvement of adjacent organs and the local extent of the disease.[5] Finally, cystoscopy and colonoscopy may be performed to exclude primary bladder tumor and primary tumors of the rectum, respectively.[5]

As mentioned above, a definitive diagnosis requires histopathological and immunohistochemical analyses.[2] Immunohistochemistry permits to distinguishing between primary and secondary tumors (Table 1). In our case, it displayed positivity for CD20, CD79a, CD10, Bcl-2 and Bcl-6, confirming the diagnosis of diffuse large B-cell lymphoma.

Up to date, standard protocol for the treatment of primary tumors affecting seminal vesicles are not described. The most common procedure consists of a multimodal scheme, where surgery is the mainstay that is complemented with chemotherapy, radiotherapy or hormonal therapy.[5] However, the treatment of secondary tumors is based on that of the underlying disease. In our case, the patient received chemotherapy indicated for this form of lymphoma. Even though the death of our patient due to other medical complications, we can affirm that he partially responded to the treatment, in light of the decrease in both seminal vesicles size and the reduction of liver damage and peritoneal implants.

Conclusion

Despite the low incidence of seminal vesicles tumors, it is of great importance to consider them in the differential diagnosis protocols for patients suspected of involvement of seminal vesicles symptoms. Due to the unspecific clinical symptoms, a combination of imaging-based techniques, histopathological and immunohistochemical analyses have to be used for the final diagnosis of these tumors and the subsequent choice of their specific treatment.

Statement of ethics

Subjects have given their written consent to publish their case.

Declaration of competing interest

None.

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