Case Report

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Malignant Mesothelioma of the Tunica Vaginalis Testis in a 89-year-old patient: A Case Report and Literature Review

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Abstract

Malignant mesothelioma of the tunica vaginalis is an exceptional tumor, which can be a fatal disease. Malignant mesothelioma is more often originating from the pleura or retroperitoneum. We report the original case of a-89-year-old Caucasian man, presenting with a voluminous right hydrocele that appeared four years ago. The patient did not report any significant comorbidity. The patient underwent surgery. At surgical exploration, several lesions closely near right testis and on the vaginalis. The lesion measured 3 x 2 cm and 1 x 0.8 cm. These specimens demonstrated signs of malignancy. On histological examination it is a tumor characterized by proliferation connective and hyaline axis surmounted bycuboidal cells with high mitotic pluristratified.

The tumor was limited to the inner leaflet of the outer vaginalis without vegetation. Occasional mitotic figures were also present.

On this basis the diagnosis of malignant mesothelioma of the tunica vaginalis testis was done, confirmed by MESOPATH netgroup. The case was presented in multidisciplinary genitourinary round and surveillance was done.

The prognosis of these tumors is often defavorable, depending on the extension of the disease. Mesothelioma of the tunica vaginalis testis represents challenging in the management, because of a difficult diagnosis and no recommendation in the treatment after surgery.

Keywords: Mesothelioma of the testis, Malignant mesothelioma, Rare tumors, Hydrocele, Testis vaginalis tunica

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Introduction

Malignant mesothelioma of the Tunica Vaginalis Testis is highly rare and often fatal tumors, representing 0.3 to 5% of all malignant mesotheliomas [1].

These tumors arise from the serosal membrane of the tunica vaginalis and have a mesenchymal origin. Most of them are pleura mesotheliomas, followed by peritoneal.

The first case was described by Barbera and Rubino in 1957 and to the best of our knowledge; about 100 cases have been reported [2].

Case Presentation

We report another rare case of malignant mesothelioma of the Tunica Vaginalis Testis in a 89 year-old Caucasian man. The patient had few comorbidities as high blood pressure, benign prostatic hyperplasia, and dyslipidemia.

He was referred to the urologist by his general practitioner for right umcomfortable hydrocele, that he had for about four years.

At physical examination, the patient showed a painless enlargement of the scrotum. Ultrasonography revealed hydrocele.

The patient underwent surgery. At surgical exploration, there were several subcentimetre lesions on the surface of the testicle and the vaginalis, the patient underwent then a right orchidectomy.

Gross examination revealed a 65 grammes testicle, measuring 4 × 2.5 × 1.5 cm and 3 × 2.5 and 1 × 0.8 cm white vegetations on the surface on albugina. The opening is brought into evidence

a hydrocele with the presence of a vegetating whitish lesion extending over 3cm.

Testicular parenchyma was free from lesion. The lesions remain macroscopically outside the testicular parenchyma, the levies pass into healthy tissue.

The vegetating lesion powered on vaginalis was included in the full paraffin. It was a tumor characterized by proliferation of connective and healthy hyaline axis surmounted by cuboidal, pluristratified cells with high mitoses. The tumor remained remote from the epididym. In some area we note the presence of a effilochage few cells in the connective hyalin tissue. On testicular tunica, the small vegetating lesion also presented the same morphological appearance infiltrating the walls of the tunica without infiltration of testicular tissue.

On immunohistochemical staining, the tumor was highly positive for Calretinin, Wilms Tumor Antibody WT1, cytokeratin AE1/AE3, variabily positive for Vimentin and Inhibin. It was negative for carcinombryonic antigen CEA, cytikeratin 5 and 6, PS 100 and PA X 8. Hormonal receptors (estrogen and progesterone) were positive, Ki67 was about 20%.

On the basis of these findings, the diagnosis of malignant mesothelioma of the tunica vaginalis testis was done. The differential diagnosis was florid mesothelial hyperplasia.

A medical oncology opinion was sought and it was decided the patient should kept under clinical and sonographic surveillance.

Discussion

Mesothelioma of the tunica vaginalis is a very rare malignant tumor occurring in middle-aged to elderly men. The median age is 53.5 years. The disease in pediatric population is exceptional (one case reported) [3].

Exposure to asbestos, long-standing hydrocele, trauma, herniorrhaphy have been shown to be risk factors. However the physiopathology remains unclear.

Clinically, patients present more often with insidious, painless enlargement of the scrotum. Thickening of the tunica vaginalis on ultrasonography and gross examination are important signs of the disease.

Macroscopically, it appears as multiple, firm, white nodules or excrescences on the surface of a hydrocele sac, the tunica vaginalis is thickened.

Histologically there are three types of malignant mesothelioma: epithelial, mesenchymal or sarcomatous and biphasic or mixed [4]. The most frequent form is the epithelial one, followed by mixed type.

Surgery is the only curative treatment. Radical inguinal orchidectomy and hemiscrotectomy is recommended. Lymph node dissection is controversial.

Despite this form of mesothelioma being much localized it is still associated with poor outcomes for the patient with only 5% of patients surviving beyond 5 years.

There is no evidence to support radiotherapy and chemotherapy in the treatment of the disease. Plas et al. think that adjuvant radiotherapy could be considered in locally advanced or metastatic disease [5]. In their review, the mean disease-specific survival for patients with or without systemic treatment was 26 and 36 months, respectively [6].

Given the rarity of mesothelioma of the testicle, the best treatment is difficult to precise.

Conclusion

We report a case of rare malignant mesothelioma of the tunica vaginalis with no history of exposure to asbestos. There is no guideline about the best treatment of these tumors.

More studies are needed to improve the management such cancers.

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