

A Case Report of Malignant Mesothelioma of the Tunica Vaginalis Testis in Iran

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Abstract: Mesotheliomas, as a rare scrotal tumor, arising mostly from the pleura and peritoneum and a small percentage in the tunica vaginalis testis which has been proven to be related to occupational exposure to asbestos. We report here a case of 69 year old with malignant mesothelioma tunica vaginalis testis. Formalin-fixed, paraffin-embedded blocks were reviewed independently by two consultant histopathologists using routine H & E tissue sections to confirm the diagnosis. Immunohistochemical staining on formalin-fixed, paraffin-embedded blocks were also performed. To our knowledge, there is no any report for the malignant mesothelioma of the tunica vaginalis testis in the reviewed literature in Iran and therefore this case can be considered as the first report of disease. All of histopathological examination and clinical data made the diagnosis of malignant mesothelioma. The case of this study showed a similar age distribution as previously reported. Records and interview results, showed no any history of direct contact to asbestos or familiar occupational exposure and this case. Accidental contact to asbestos, however, may be occurred during his life, but currently, it can be considered as idiopathic or unknown aetiology.

Key words: Malignant mesothelioma • Tunica vaginalis testis • Testis

INTRODUCTION

Mesotheliomas, as an uncommon occupational tumor, arising from the serosal membranes of the coelomic cavities in which occur mostly in the pleura and peritoneum and a small percentage in the pericardium or tunica vaginalis testis [1-10]. It is considered as a rare scrotal tumor with an unfavourable course in most cases. The development of malignant mesothelioma has been proven to be related to occupational exposure to asbestos or different asbestos-containing materials [5-7, 11-20]. In addition, radiation and radiotherapy has also been proposed as causes of malignant mesothelioma. The major symptoms of patients with malignant mesothelioma are an enlargement of the scrotum, which develop within several months. Mesothelioma of the tunica vaginalis testis most commonly reported to occur in patients older than 45 years, but 10 percent of cases occurred in patients younger than 25 years [6, 11, 13].

The incidence of disease is related to the location of living and the pattern of asbestos use, in which likely peak in Europe but uncommon in the United States and other countries [12, 21]. Reviewing the literature, provide evidence that the incidence of disease is being increased. However, to our knowledge, no any cases of malignant mesothelioma of the tunica vaginalis testis were reported in our country.

MATERIALS AND METHODS

We report here an Iranian male age 69 years old man with enlargement of right scrotum, who referred to surgery ward of Shahid Rahnemoon hospital for operation. His general and urologic history was uneventful, with no definite personal or familial history of asbestos exposure. Urologic examination was normal except for a translucent hydrocele on the right side. The primary diagnosis of left inguinal hernia was made when hernioraphy and hydrocelectomy was performed. Hematoxiline and eosin

stained were reviewed and immunohistochemical staining on formalin-fixed, paraffin-embedded blocks were also performed. Twelve months after hydrocelectomy, the second surgery of inguinal orchidectomy was performed because of hard irregular mass and several vegetations were noticed in his sac of hydrocele. Due to the presence of small papillary excrescences of the tunica vaginalis, a frozen section was obtained and final histopathology revealed a multifocal malignant mesothelioma of the tunica vaginalis. A resection of the hydrocele wall was carried out, but final histopathology revealed a multifocal malignant mesothelioma of the tunica vaginalis. Inguinal orchidectomy and right hemiscrotectomy was also performed later. Occupational history and areas of residence are obtained by interview using questionnaire.

RESULTS

Patient had a 30 year history of work in textile factory and five year history of left inguinal mass and hydrocele. Because there were no tumor markers or prognostic parameters reported for patients with malignant mesothelioma of the tunica vaginalis testis, we investigated the influence of a patient's age, history of asbestos exposure, tumor histology, primary therapeutic approach and the presence of metastasis at diagnosis on survival. Histopathologically, polypoid and tumoral structures of epithelial cells with vesicular and different cycle to oral and nucleus with many eosinophilic cytoplasm was observed. There were also glandopapillary plates and structures of fibrohilianic axis with abundant atypical mitosis, but the cytoplasm of some tumor cells were clear. Although testis and epididym was intact but necrosis area, homocysteine sediment and psamoma bodies with dysplastic changes of epithelium of tunica present within tumoral structures were also observed. Immunohistochemical test was also used to rule out the adenocarcinoma. Results showed that crinitin, cytokeratine, vimentin and epithelial membrane antigen (EMA) were positive. All of these data were compatible with malignant mesothelioma, but records and interview results of this worker showed no any history of direct contact to asbestos or familiar occupational exposure since he has been worked for more than 28 years in dye section of textile factory.

DISCUSSION

Initial description of malignant mesothelioma of the tunica vaginalis testis was first introduced by Barbera and Rubino [22]. To our knowledge, more than 80 cases of

malignant mesothelioma of the tunica vaginalis have been described so far [7] but nothing has been reported or published previously of the malignant mesothelioma of the tunica vaginalis testis not only in Yazd province but also in Iran country. According to recent review of literature on asbestos exposure and mesothelioma of the tunica vaginalis, 23-41% of cases have a history of direct contact to asbestos or familiar occupational exposure [7, 12, 13-18, 20]. However, the real prevalence of disease may have been underestimated, as sufficient information was only given in 51.4% of the reported cases of malignant mesothelioma of the tunica vaginalis testis. The case of this study showed a similar age distribution as previously reported. In contrast, no any asbestos exposure, either direct contact or familiar occupational history, were traced in this case. The history of occupational exposure showed that, this subject worked only in dye section of textile factory for about 28 years. Accidental contact to asbestos, however, may be occurred during his life, but currently, it can be considered as idiopathic or unknown aetiology [23]. Therefore, more attention should be paid on workers who work in the dye section of textile industry.

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