

An Unexpected Diagnosis of Metastatic Mesothelioma of the Tunica Vaginalis in a Patient Presenting with a Hydrocoele: Case Report and Review of the Literature

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Abstract: Mesothelioma of the tunica vaginalis is a rare cancer most often diagnosed intra-operatively. This case reports a 72 year old gentleman who presented with a hydrocoele and was later diagnosed with mesothelioma of the tunica vaginalis. Unfortunately, the cancer in this case followed an aggressive course and there was evidence of pulmonary involvement on interval CT scans which was in keeping with metastatic disease. As clinical guidelines have not yet been suggested, the authors add this case to the literature and repeat previous recommendations of early radical inguinal orchidectomy and strict follow up.

Keywords: Mesothelioma of the tunica vaginalis, oncology, metastatic mesothelioma, hydrocoele.

INTRODUCTION

Mesothelioma of the tunica vaginalis is a rare but aggressive form of cancer which is managed by radical surgical resection [1]. Most studies report a median survival of 20-23 months. There are less than 230 cases reported in literature worldwide and only 80 of metastatic disease [2,3]. Owing to its non-specific presentation, wide age distribution and lack of tumour markers, most are diagnosed intraoperatively when performing procedures for benign conditions [1]. We present the 81st such case; a 72 year old gentleman who presented with a hydrocoele which unfortunately followed a highly aggressive course and widely metastasised.

CASE REPORT

A 72 year-old was referred to urology clinic with a history of non-visible haematuria. Examination and ultrasound confirmed a right hydrocoele. As the hydrocoele was asymptomatic, conservative management was elected and he was discharged. Over the next four months he had progressive right scrotal swelling with associated pain and was listed for a right hydrocoelelectomy.

Intraoperatively, the scrotal sac was abnormal and thickened. A portion of the sac was excised and sent for histological examination. A malignant mesothelioma was diagnosed, confirmed by immunohistochemistry. CT Chest abdomen pelvis showed an indeterminate nodule along the posterior renal fascia on the right with no other evidence of

metastatic disease. Subsequent PET scan was negative and he returned for a radical right inguinal orchidectomy. Histology showed a biphasic mesothelioma which was a circumferential tumour in the tunica with invasion of the epididymis. In the distal spermatic cord, there were mesothelial lined small cysts with papillary proliferation and atypia suggesting the tunica vaginalis of the testis as the primary site.

A hemi-scrotectomy was performed with no evidence of further disease. Interval CT scan at 3 months showed a 4mm nodule in the right lung and unfortunately at 6 months there was evidence of progressive pulmonary lesions in keeping with metastatic disease. He has been referred to the oncology team for consideration of chemotherapy.

DISCUSSION

The tunica vaginalis comprises two layers of mesothelial cells. The majority of mesotheliomas arise in the pleura, but can also occur in the peritoneum, pericardium and tunica vaginalis [1].

Mesothelioma of the tunica vaginalis accounts for 0.2% to 5% of all cases, with fewer than 230 cases reported in the literature [2]. The mean age of presentation is 60 years [1]. Asbestos exposure has been reported in 12.5 to 41% of cases [1], with trauma and longstanding hydrocoeles being cited as causal factors [5].

Macroscopically the tumour appears as multiple firm tan-to-white nodules, with 33% of patients presenting with local invasion of adjacent structures. If one is fortunate enough to suspect the condition pre-operatively, the ultrasonographic appearances can mimic a hydrocele with additional paratesticular papillary excrescences[1]. Grossly, the appearance could easily be mistaken for a chronically inflamed and thickened sac wall as demonstrated in Fig-1.



Fig. 1: Gross specimen illustrating unusual appearance of the mesothelioma of the tunica vaginalis

Once the diagnosis is established, radical orchidectomy is advocated[1, 3]. Staging should be performed with CT and PET [1] with 15% of patients presenting with metastatic disease. Tumour recurrence is 53% at 2 years, with local recurrence ranging from

35.7% after simple hydrocoelectomy to 10.5% after a scrotal orchidectomy. Adjuvant radiotherapy and chemotherapy have not demonstrated improvement in remission rates [4, 5]. Median survival is less than 2 years with an overall mortality of 40%[1, 3].

CONCLUSION

In summary, this often fatal malignancy is as rare as it is difficult to diagnose. In this case the diagnosis came as a surprise, owing to an unusual hydrocoele sac being sent for histology. The lesson is that unusual appearances warrant histological examination as rare lesions do occur.

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