Primary malignant mixed müllerian tumour of the fallopian tube. Report of a case

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Summary

Malignant mixed müllerian tumour of the fallopian tube is an extremely rare lesion and to date only approximately 50 cases have been reported. The tumour is seldom distinguished preoperatively from other more common lesions or ovarian cancer. We report a case of a 60-year-old woman who presented to our hospital with pelvic pain. There was no clinical evidence of ascites or adenopathy. Ultrasound and abdominal and pelvic computed tomography showed a left adnexal mass. Total abdominal hysterectomy and bilateral salpingo-oophorectomy were carried out. Grossly the left side of the fallopian tube was dilated and the cut surface revealed a solid mass filling the entire lumen. Histological examinations showed a malignant mixed müllerian tumour. The tumor was an admixture of both carcinomatous and sarcomatous elements. The carcinomatous element was composed of well to moderately differentiated squamous cell carcinoma and the sarcomatous component was made up of anaplastic spindle shaped cells with hyperchromatic nuclei. An immunohistochemical study was performed. The patient was admitted to the anticancer hospital for further treatment. The prognosis of a primary malignancy of the fallopian tube is poor and depends more on staging than on histologic type and grade.

Key words: Fallopian tube; Mixed müllerian tumour; Immunohistochemistry.

Introduction

Primary malignancies of the fallopian tube are rare accounting for about 0.3-1.1% of all gynaecological malignancies [1]. Malignant mixed müllerian tumour of the fallopian tube is an extremely rare lesion and to date only approximately 50 cases have been reported [2, 3]. The tumour is seldom distinguished preoperatively from other more common lesions or ovarian cancer.

Case Report

A 60-year-old woman presented to our hospital with pelvic pain. At physical examination there was no evidence of ascites or adenopathy. Ultrasound and abdominal and pelvic computed tomography (CT) showed a left adnexal mass. Chest radiographic findings were normal. Bone and liver scan findings were negative. CA125 tumour marker levels were checked and found to be mildly elevated. Total abdominal hysterectomy and bilateral salpingo-oophorectomy were carried out. Grossly the left side of the fallopian tube was 8 cm in length and 6 cm in its widest luminal dilatation. The entire tubal lumen was obliterated by a solid mass. Histological examination showed a malignant mixed müllerian tumour. The tumour was an admixture of both carcinomatous and sarcomatous elements. The carcinomatous element was composed of well to moderately differentiated squamous cell carcinoma (Figure 1) and the sarcomatous component was made up of anaplastic spindle shaped cells with hyperchromatic nuclei (Figure 2). The tumour elicited a high mitotic rate and areas of necrosis. Microscopically transition from benign columnar epithelium of the tubal lumen to the neoplastic epithelium was found (Figure 3). The tumour infiltrated the entire thickness of the fallopian wall and the mesosalpinx. Sections of both ovaries, uterine cavity and cervix were unremarkable. The right fallopian tube showed features of chronic non specific salpingitis. An immunohistochemical study showed that vimentin was positive in the sarcomatous component. A considerable number of spindle shaped cells were immunoreactive with smooth muscle actin (Figure 4), CK AE1 (Figures 5, 6) and CK AE3. Desmin and CA125 were reactive in a few cells. The patient was admitted to the anticancer hospital for further treatment.

Discussion

Fallopian tube malignancy was first described by Renaud in 1847 [1]. It was proposed that the diagnosis of tubal cancer be based on three conditions: 1) the main tumour should be in the tube, 2) microscopically the mucosa should be involved principally, and 3) microscopically transition from benign columnar epithelium must be found [4]. The etiology remains unknown. Infertility and chronic salpingitis were believed to increase the incidence but have not yet been proven. There are at least 1,500 cases of malignant tubal lesions reported in the literature but only approximately 50 were identified as mixed müllerian tumours (MMT) [1-5]. Malignant mixed müllerian tumours are uncommon neoplasms of the female genital tract that histologically are defined by the presence of malignant epithelial and stromal elements. MMT can arise from the cervix, fallopian tube and pelvic peritoneum but the endometrium and the ovary are the most common primary sites [6]. Patients with fallopian tube malignancy usually present with pelvic pain, a pelvic mass, postmenopausal bleeding and serosanguinous vaginal discharge [1, 4, 6]. Imaging studies like hysterosalpingography helps in detecting intraluminal growth. A CT scan help in localizing spread to other

Revised manuscript accepted for publication April 30, 2009

Fig. 1

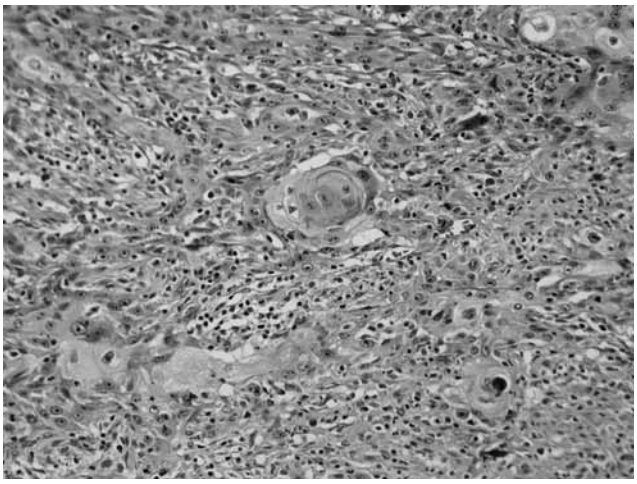

Fig. 2

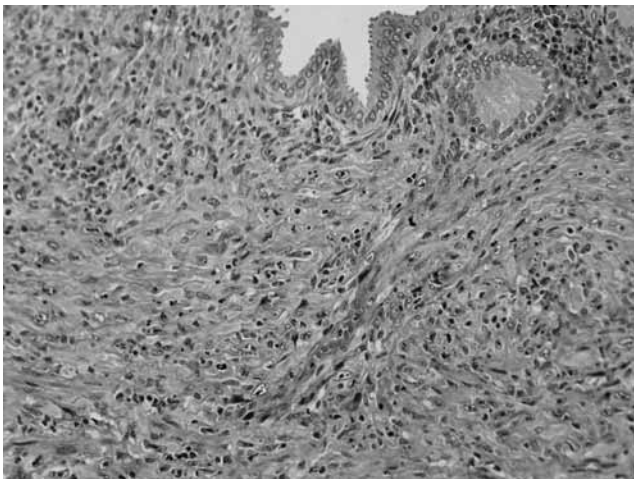

Fig. 3

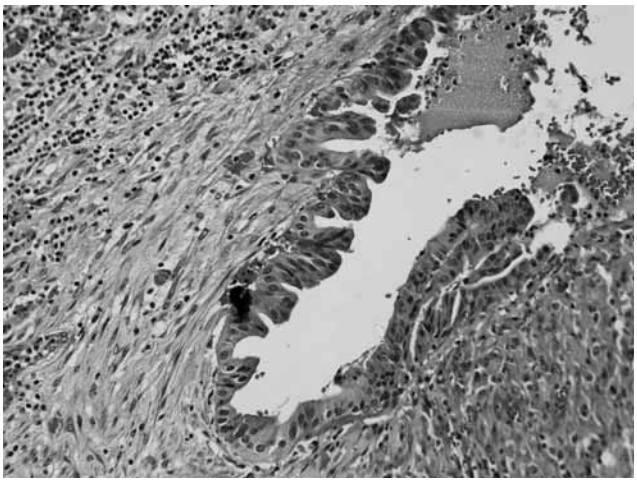

Fig. 4

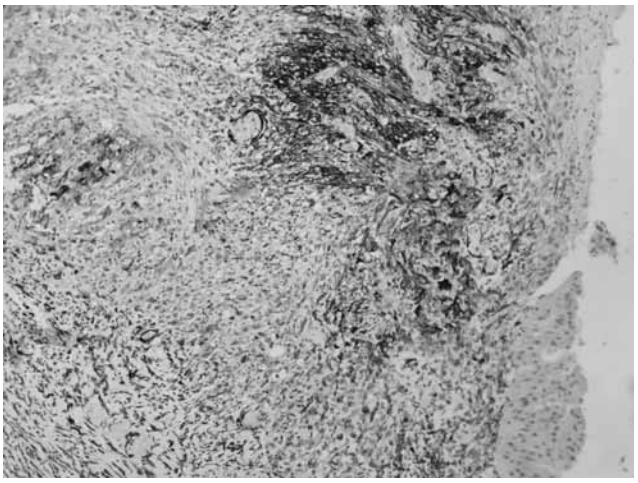

Fig. 5

Fig. 6

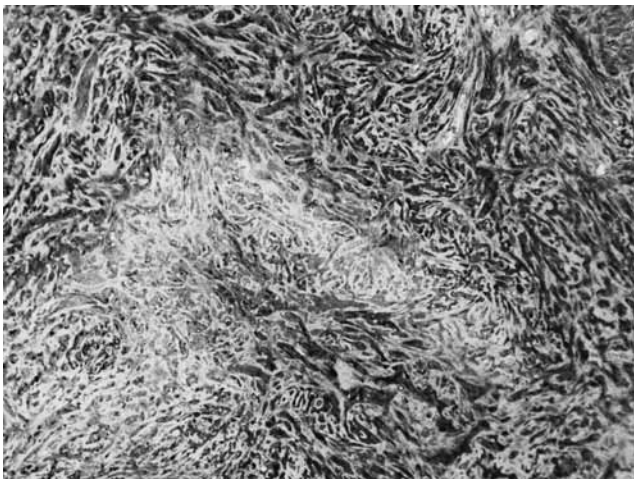

Figure 1. — Well differentiated squamous cell carcinoma (H&E x 200).
Figure 2. — Spindle shaped cells of the sarcomatous component (H&E x 200).
Figure 3. — Dysplastic epithelium of the fallopian tube (H&E x 200).
Figure 4. — The sarcomatous component was immunoreactive with smooth muscle actin (SMA x 100).
Figure 5. — The squamous and sarcomatous components were strongly immunoreactive with CK AE1 (x 20).
Figure 6. — The sarcomatous component was immunoreactive with CK AE1 (x 100).

intraabdominal or retroperitoneal sites. Increased levels of CA125 have been described in some patients [1-7]. Mixed müllerian tumours are initially chemosensitive but have an aggressive clinical course, typically with early relapse after treatment and a poor long-term prognosis. The median survival is 18 months. Radiotherapy is of no help [8-12]. The prognosis depends more on staging than on grade. No morphological factor has been found to correlate with survival, but a tendency was observed for MMTs with a high epithelial nuclear grade, a predominance of the mesenchymal component, or a rhabdomyoblastic mesenchymal component to be associated with more aggressive behaviour. Moreover, patients with a predominating carcinomatous component had a higher response rate to chemotherapy than patients with a predominating sarcomatous component [13-16].

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