MALIGNANT MIXED MULLERIAN TUMOURS

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Introduction

Malignant mixed mullerian tumours (MMMT) are neoplasms composed of tissues differentiating both as carcinoma and sarcoma. Based on the differentiation of sarcomatous element towards structures normally found in the uterus, these are classified as homologous and heterologous variety. In the heterologous type, specific mesenchymal elements such as skeletal muscle, cartilage, bone or fat are present, which are normally not found in the uterus. The distinction between the two varieties may require the study of numerous sections and therefore may not be possible on material obtained by curettage. The malignant stroma may be so inconspicuous in such a specimen as to be missed altogether, and the lesion may be misdiagnosed as an ordinary adenocarcinoma [1,2].

Case Report

A 65 year old lady, presented with complaints of pelvic pain associated with bleeding per vaginum of three months duration. General and systemic examination revealed no abnormality. There was no evidence of hepatosplenomegaly, pelvic mass or free fluid in the abdomen. Routine laboratory examinations were within normal limits, excepting mild anaemia (Hb-10.5 gm/dl). Gynaecological examination revealed a bulky uterus, with a pinkish white polypoid mass protruding through the cervical os. It was soft in consistency and tender to touch. The patient was taken up for dilatation and curettage, under general anaesthesia. The mass was fragile and bled easily. It was not possible to reach within the uterine cavity. Thus a biopsy was taken from the polypoid mass and the tissue sent for histopathological evaluation.

Gross examination showed two bits of soft, fragile, reddish-brown tissue. The larger bit measured 2.5x1x0.5 cm in size. The entire tissue was processed and serial sections were examined. Microscopically, it was a biphasic tumour with an admixture of carcinomatous and sarcomatous component (Fig-1). There was a predominance of the sarcomatous element, consisting of bizarre malignant cells and mitotic figures (Fig-2). Focal areas exhibited large racquet shaped cells (Fig-3) and strap cells (Fig-4) with distinct cross striations (Fig-5). This was interspersed with areas of moderately differentiated adenocarcinoma-endometriod type. In view of the scanty tissue yield and study of serial sections to

identify all components of the heterologous MMMT-rhabdomyosarcoma, histochemical and immunohistochemical studies could not be done. The patient was referred to civil tertiary care centre for further management. Despite all efforts the case was lost to follow-up.

Discussion

MMMT's are rare uterine neoplasms that are seen almost exclusively in the older postmenopausal women. They have been occasionally observed in women less than 40 years of age [3]. The most common presentations are uterine enlargement, abnormal bleeding per vaginum, pelvic pain and vaginal discharge. A history of prior pelvic irradiation has been reported in about 5-30% patients [4]. It has also been reported in patients of breast cancer on long term Tamoxifen therapy [5]. Grossly, they present as large, soft, polypoid growth involving the endometrium and myometrium, and sometimes protruding through the cervix. Frequently they contain areas of haemorrhage and necrosis which give them a variegated appearance [2].

MMMT, heterologous type, of the uterus are rare entities. The most common types are rhabdo-myosar-

Fig. 1 : MMMT rhabdomyosarcoma : mixed carcinomatous and sarcomatous area (H&E x100)

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Fig. 2 : MMT rhabdomyosarcoma : strap cells (H&E x400)

Fig. 3 : MMT rhabdomyosarcoma : rhabdoid cells (H&E x100)

coma, osteosarcoma and chondrosarcoma. Liposarcoma is very rare. The incidence of MMT - rhabdomyosarcoma is very low. Tangtrakul et al [6] quoted an incidence of 1 case out of 15 uterine sarcomas in a study spanning 18 years. Auerbach et al [7] mentioned 6 out of 32 cases; Vlahoussis et al [8] stated 1 out of 9 cases over 10 years study and King et al [9] documented 3 out of 21 cases over 20 years. The malignant stroma, in the material obtained by way of curettage, is usually so inconspicuous, that rhabdomyosarcoma may be misdiagnosed as an ordinary adenocarcinoma [1]. No definite report of MMT-rhabdomyosarcoma diagnosed on curettage material is available.

It is important to distinguish MMTs from pure sarcomas, adenosarcomas and undifferentiated carcinomas. A panorama of bizarre malignant cells in a uterine neoplasm should immediately arouse suspicion of an MMT. A thorough search should be undertaken to find differentiated areas to confirm this initial impression. Finding heterologous sarcoma is helpful,

Fig. 4 : MMT rhabdomyosarcoma : rhabdoid cells (H&E x400)

Fig. 5 : MMT rhabdomyosarcoma : strap cells with cross striations (H&E x400)

since all heterologous sarcomas will turn out to be MMT. Distinguishing MMT from pure sarcoma depends upon finding carcinoma, which may be sparse and difficult to find in some tumours. Mullerian adenosarcomas are known to have a better prognosis. It is not uncommon for some of the epithelial elements within a MMT to be cytologically bland. To avoid a misdiagnosis of adenosarcoma, careful sampling to identify a malignant epithelial component is essential [2].

MMMTs frequently contain large cells, which are anaplastic, and racquet shaped with abundant eosinophilic cytoplasm. Confirmation of rhabdomyosarcomatous element can be done by PTAH stain, immunohistochemistry or by electron microscopy [7,10].

MMMTs are highly aggressive tumours. Extension into the pelvis, lymphatic and vascular permeation, and distant lymph-borne and blood-borne metastasis are common. If at the time of hysterectomy there is an

extension into the serosa or beyond, then the prognosis is poor.

The treatment modality comprises total abdominal hysterectomy with bilateral salpingo-oophorectomy and pelvic lymphadenectomy. The response to radiotherapy and chemotherapy has generally been poor. The most common sites of recurrence are lungs and abdominal cavity. A particular variant, i.e. MMMT-with rhabdoid features, is known to have an aggressive clinical course, resistance to chemotherapy and a rapidly fatal outcome [10].

In order to diagnose an MMMT, it is essential to identify carcinomatous and sarcomatous areas. The carcinomatous area may be sparse and difficult to find in some tumours. Some of the epithelial elements may be cytologically bland and a misdiagnosis of adenosarcoma may be made [2]. Further, to label it as rhabdomyosarcoma may be difficult, since it may be focal and its identification requires study of serial sections. The quantum of tissue obtained by way of curettage is usually scanty, as in this case, and it may not be possible to diagnose rhabdomyosarcoma on such a sample [1]. The aim of presenting this case report is to highlight a rare case of malignant mixed mullerian tumour-rhabdomyosarcoma, which has been diagnosed on light microscopy of material obtained by curettage.

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