**Case Report:**

"Malignant mixed mullerian tumor of the uterus: a case report"

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**ABSTRACT:**

Malignant Mixed Mullerian Tumor (MMMT) of the uterus is an uncommon (2% – 5%), extremely aggressive neoplasm histologically composed of malignant epithelial and mesenchymal elements. They are found predominantly in postmenopausal women, presenting with uterine bleeding and enlargement. The present case is of a 70 year old post-menopausal female who had peri vaginal bleeding since 2 months. Ultrasonography revealed an ill-defined heterogeneous soft tissue mass, suggesting possibility of neoplastic pathology of the uterus. Diagnostic curettage was done, which on histopathological examination showed Malignant Mixed Mullerian Tumor with heterologous elements. Panhysterectomy was done, and the diagnosis of Malignant Mixed Mullerian Tumor of the uterus was confirmed.

**KEYWORDS:** Malignant Mixed Mullerian Tumor, Uterus, Postmenopausal.

**INTRODUCTION**

Malignant Mixed Mullerian Tumors (MMMTs) of the uterus are rare, high grade neoplasms comprising only 2 to 5% of all tumors derived from the body of the uterus. It is a biphasic neoplasm comprising of both carcinomatous (epithelial tissue) & sarcomatous (connective tissue) components. It is divided into 2 types, homologous (in which the sarcomatous component is made up of tissues found in the uterus such as endometrial, fibrous & or smooth muscle tissue) & a heterologous type (made up of tissues not found in uterus, such as cartilage, skeletal muscle & or bone). In the present report, we describe a case of Malignant Mixed Mullerian Tumor of the Uterus with heterologous elements.

**CASE REPORT**

A 70 Year old, multiparous woman presented with post-menopausal per vaginal bleeding since 2 months.

P/S & P/V Examination: - bulky uterus.

Chest X-ray - NAD

USG: - Revealed an ill- defined heterogeneous soft tissue mass of about 5×4.8 cm in the uterine body, suggesting a possibility of neoplastic pathology.

Diagnostic curettage was done & sample was sent to Dept. of Pathology. Histopathological examination showed a Malignant Mixed Mullerian Tumor with Heterologous Elements. This was followed by surgery. The type of operation was Total Abdominal Hysterectomy with Bilateral Salpingo- Oophorectomy

In pathologic evaluation, grossly, the tumor was polypoid, friable with areas of haemmo-
rhages&necrosis, measuring 8.5×4×3.5cm & filling the uterine cavity. The tumor was arising from the postero-lateral uterine wall. The endometrial cavity also showed 3 polypoidal masses, largest measuring 1 cm in diameter, which on cut section showed cystic spaces containing mucinous fluid.

(Fig 1 & 2).

Light microscopy of the mass showed a heterogeneous malignant neoplasm with biphasic pattern. The epithelial parts of the tumor consisted of glandular component with papillary pattern at places & focal squamous differentiation. Furthermore, sarcomatous areas consisting of spindle oval nuclei focally arranged in bundles accompanied by foci of chondro-sarcoma were found. Microscopic examination of other 3 polypoidal masses showed similar histopathological features. (Fig no:3,4&5).

Histopathological examination of left ovary showed a metastatic deposit of Adenocarcinoma.

The Final Diagnosis given was Malignant Mixed Mullerian Tumor with Heterologous Elements with Metastatic Deposit in the Left Ovary.

The Stage of the tumor was IIIA.

Discussion

Malignant mixed mullarian tumors of the uterus are rare neoplasms that are practically always seen in postmenopausal patients. The symptom triad indicative of MMMT includes pain, severe vaginal bleeding and passage of necrotic tissue per vaginum. Very little is known about the aetopathogenesis of MMMTs. Exposure to radiation, excessive estrogen exposure, obesity, and nulliparity are believed to be associated with MMMT development. In our case the patient was 70yr old postmenopausal women presenting with abnormal vaginal bleeding, with no known predisposing factor.

The usual location is the uterine body, particularly the posterior wall of the fundus but a few cases with MMMT of uterine cervix have been reported as well. In our case the tumor was arising from posterior-lateral uterine wall along with three tiny polypoidal masses. Traditionally diagnosis of MMMT is most often made postoperatively by histological examination. However, pre-operative diagnosis of uterine MMMT will facilitate the planning of appropriate surgical management with adjuvant therapy. Radiological investigations show MMMT to be a heterogeneous, hypodense, ill-defined mass filling the uterine cavity. Grossly MMMTs are almost invariably fleshy, necrotic, haemorrhagic, polypoidal growths that often filled the uterine cavity. In our case similar gross findings were noted. The characteristic microscopic features of MMMTs are a mixture of carcinomatous and sarcomatous elements resulting in a biphasic pattern. The epithelial component of a carcinosarcoma may be any type of Mullerian carcinoma: mucinous, squamous, serous, endometroid, high grade papillary, clear cells, undifferentiated, or a mixture of these types. The appearance of the sarcomatous component is the basis for division of these neoplasms into homologous (leiomyosarcoma, stromal sarcoma, fibrosarcoma) and heterologous varieties (chondrosarcoma, rhabdomyosarcoma, osteogenic sarcoma, liposarcoma). In our case the histopathological diagnosis given was malignant mixed Mullerian tumor (Adenocarcinoma) with heterologous elements (Chondro-sarcoma).

MMMTs express epithelial (EMA, Pancytokeratin) & stromal lineage marker in relation to their histological appearances such as desmin in muscular differentiation or S100 in areas with chondroid or lipomatous differentiation. However IHC studies are not mandatory for diagnosis of MMMT.
Abdominal hysterectomy with bilateral salpingo-oophorectomy and pelvic lymphadenectomy is the treatment of choice, usually followed by adjuvant therapy. MMMTs are highly aggressive neoplasms. Reoccurrence occurs in over half of patients after primary surgical and adjuvant therapy. Specific factors that increase the risk of recurrence include patient’s age, adnexal spread, and metastasis to the lymphnodes, tumor size, lymphovascular involvement, histologic grade, peritoneal cytologic findings, & the depth of invasion of the primary tumor. Extension to the pelvis, lymphatic and vascular permeation, distant lymph-borne and blood – borne metastasis are all common. The most common site of metastatic deposit include lung, peritoneum, pelvic or para-aortic, adrenal glands or bone, heart, & brain. In our case the tumor had produced metastatic deposit to the left ovary.

Although uterine MMMT account for less than 5% of uterine malignancies, they are responsible for over 15% of uterine cancer-related deaths. Over the past 30 years despite evolving and advancing therapeutic regimes, prognosis remain poor, with no significant improvement in survival or recurrence rate. The most important prognostic features are the stage, the size of the tumor, and the depth of myometrial invasion. The patient, in our case, had stage IIIA disease. The patient was referred to Tata Memorial Hospital for further adjuvant therapy.

Fig 1: Specimen of total abdominal hysterectomy showing polypoidal tumor mass in the uterine cavity with areas of hemorrhage & necrosis.

Fig 2: Specimen of total abdominal hysterectomy showing polypoidal tumor mass arising from the postero-lateral uterine wall along with tiny polypoidal masses.

Fig 3: Photomicrograph showing adenocarcinomatous & chondrosarcomatous elements in MMMT (H&E 4X).

Fig 4: Photomicrograph showing a papilla lined by tumor cells (H&E 40X).
Fig 5:Photomicrograph showing foci of chondrosarcoma in MMMT(H&E 4X).

References:


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