Case report

primary malignant mixed mullerian tumor arising from retroperitoneum with a metachronous endometrial cancer: a case report

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Abstract

Extragenital malignant mixed Müllerian tumor is an extremely rare presentation of malignant mixed Müllerian tumor, especially when combined with a metachronous endometrial cancer.

We report the clinical course and pathologic findings of a case of retroperitoneal Malignant Mixed Müllerian Tumor with metachronous endometrial cancer, in a 64-year-old, gravid 6, Para 7, live 6, death 1 with a complaint of post menopausal bleeding. This is the case of extragenital Malignant Mixed Müllerian tumor combined with metachronous malignancy reported.

Although extragenital Malignant Mixed Müllerian Tumor is very rare and has a poor prognosis, a longer survival time might be achieved by recognizing them in that rare site in advance and treating them by cytoreductive surgery, radiotherapy and chemotherapy.

key words: malignant mixed mullerian tumor, endometrial cancer, retroperitoneum, carcinosarcoma.

1. Introduction

The HMG-CoA lyase (HL) deficiency or 3-hydroxy-Malignant Mixed Mullerian Tumor (MMMT) or Carcinosarcoma is an uncommon tumor and highly aggressive in females and the occurrence of this disease out side the genital tract is extremely rare.[1] MMMT is a biphasic neoplasm comprising of both carcinomatous (epithelial tissue) and 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) and a heterologous type (made up of tissues not found in uterus, such as cartilage, skeletal muscle or bone).[2]. The endometrium is generally reported as the most common site of MMMT.[3] MMMT mostly occurring in the female genital tract in elderly postmenopausal women. Furthermore, they have also been described in head and neck, gastrointestinal tract, biliary tract and peritoneum.[4].

MMMT of extragenital origin was first reported by Ober and Blach in 1955[5]. In a review of the English literature since 1955 to 2011, only 49 cases of extragenital MMMT have been reported. 16 out of these 49 (32.7%) extragenital MMMTs[1] were associated with synchronous or metachronous colonic cancer or gynecologic malignancy and serous carcinoma of the peritoneum[6]. We reported the clinical course and pathologic findings of an extragenital MMMT arising from retroperitoneum with a metachronous endometrial cancer in a post menopausal woman, we then performed a brief literature review about this rare tumor.

2. Case presentation:

The patient was a 64-year-old woman, gravid 7, para 7, live 6, and death 1 (G7P7L6D1) was admitted with a complaint of post menopausal bleeding 6 months ago. No other symptoms were recognized. She has been suffering from diabetes mellitus and hypertension for 5 years. Regarding familial history, no evidence of the other diseases were found. Physical examination showed no abnormal sign. All hematologic and biochemical laboratory tests were within normal limit. Sonography of pelvis showed mild increased in uterine size measuring 82x 50 x 33 mm and diffuse endometrial thickening. Endometrial cavity partially occupied by a mass-like lesion measuring 28 mm in maximum dimension with vascular flow. Myometrial echo was normal. D & C was done and pathologic report was endometrioid uterine adenocarcinoma, welldifferentiated. Patient underwent total abdominal hysterectomy plus bilateral salpingooophorectomy with lymphadenectomy and omentectomy. Pathological
study showed a malignant epithelial neoplasm composed of back to back (crowded) and irregularly pleomorphic glands with foci of papillary architectures lined by neoplastic cells. These cells have vesicular to hyperchromatic nuclei, occasionally prominent nucleoli and modest cytoplasm. Tumor invaded stroma and reached to superficial muscularis layer (Stage: IB). No further treatment was performed after the first operation. The patient was admitted 6 months later for the following symptoms such as abdominal pain, constipation and bowel obstruction symptom. On physical examination, a lower abdominal mass was palpated. Colonoscopy was normal. Computed tomography scan of pelvis showed a huge mass with central necrosis measuring 10cm in maximum dimension located between rectal and bladder walls. The tumoral mass invaded to adjacent structures. In addition, a smaller mass measuring 7cm in maximum dimension in left superior part of the pelvis is identified. Ultrasound-guided core needle biopsy of the both pelvic masses was done and pathologic examination came up with carcinomatous involvement, so the patient was re-operated. In macroscopic examination, retroperitoneal masses were composed of several pieces of cream-brown elastic tissue with foci of necrosis and hemorrhage, totally measuring 8x6x5.5cm. The mass of omentum was intact measuring 10x7x3cm (Figure-1). Cut surfaces were solid and showed foci of necrosis too. Pathologic study showed a biphasic malignant neoplasm composed of carcinomatous and sarcomatous (stroma-like elements).

Figure 1: Macroscopic examination of the omental mass, MMMT

The carcinomatous component including nests and sheets of the epithelial tumor cells with no glandular structures, squamous metaplastic cells were also seen. These cells had hyperchromatic to vesicular pleomorphic nuclei, prominent nucleoli and eosinophilic cytoplasm. Foci of necrosis and some mitotic figures were evident. Sarcomatous component composed of sheets of discohesive tumor cells characterized by hyperchromatic to vesicular nuclei, prominent nucleoli and clear cytoplasm. Frequent mitotic figures, giant and bizarre cells were also noted. The stroma of the sarcomatous component showed foci of myxoid degeneration.

Figure 2: Histological picture showing the admixed carcinoma and spindle cell sarcomatous elements (H&E x400)

3. Discussion:
Malignant mixed Mullerian tumors or carcinosarcomas of the uterus are rare neoplasms that are practically always seen in postmenopausal patients [7]. MMMT of extragenital origin is even rarer. [8] MMMT most frequently occurs in the endometrium, vagina, cervix, and ovary in descending order of frequency [9,10]. The symptom triad indicative of MMMT includes pain, severe vaginal bleeding and passage of necrotic tissue pervaginum [11]. Since histological evaluation shows both carcinoma (epithelial) and sarcoma (mesenchymal) components, this disorder is also named carcinosarcoma. Extragenital MMMT can occur at any site of peritoneum and is onetyp e of primary peritoneal carcinomas (PPC) which was first described by Swerdlow in 1959 [8]. It has the characteristicsof involvement in the peritoneum by carcinomainwithout an obvious primary site [12]. The majority of PPCs present in pathology as serous papillary carcinomas, as well as peritoneal mixed epithelial carcinomas, while the extragenital MMMTs are rarely reported. PPC is a rare cancer closely related to epithelial ovarian cancer and develops in cells from the lining of the pelvis and
abdomen (peritoneum). These cells are similar to the cells on the surface of the ovaries. Like ovarian cancer, PPC tends to spread along the surface of the pelvis and abdomen. Symptoms of patients with PPC including abdominal pain or bloating, nausea, vomiting, indigestion and change in bowel habits [13]. Most PPCs are serous papillary adenocarcinomas with a relatively good prognosis but the primary peritoneal MMMT, a rare type of PPC, usually has an unfavorable outcome according to the previous literature [14].

MMMT of extragenital origin was first reported by Ober and Black in 1955 [5] and, until now, to the best of our knowledge, only 48 cases have been reported in the English literature. It has been reported to have arisen from the peritoneum, mesentery, omentum, spleen, diaphragm and retroperitoneum. Among all the reported cases, the majority were menopausal women with a median age of 62.8 years (range 33-87 years). Sixteen of the 49 patients (32.7%) presented with synchronous or metachronous malignancies including colonic (three cases), ovarian (six cases including the present case), fallopian tubal (three cases), endometrial (two), cervical (one) and one synchronous serous carcinoma of the peritoneum. In our case, endometrial carcinoma metachronously was seen with carcinosarcoma of the retroperitoneum. Due to a high incidence of synchronous or metachronous colonic cancer or gynecologic malignancy originating from the müllerian duct, clinicians should carefully check the genital tract in detail during the resection of primary MMMT.

Little information about the management of extragenital MMMT is available. All suggestions for the treatment of extragenital MMMT are based on individual cases. Treatments including cytoreductive surgery and chemotherapy have been reported. Surgical management is usually necessary due to the clinical presentation caused by the mass effect. However, a radical surgical treatment is often obtained with difficulty. It seems that chemotherapy is more important than surgical treatment and the treatment choice of MMMT is similar to that of genital MMMT [15].

Our patient got surgery and radiotherapy too. We introduced a 64-year-old woman which was diagnosed with metachronous endometrial carcinoma and retroperitoneal MMMT which was reported just in few previous other studies [6], Therefore, it is worth closely following the patients especially in the long term.

So in a Conclusion extragenital MMMT is extremely rare malignancy and has a poor prognosis due to its aggressive biological behavior. Synchronous or metachronous gynecologic tumors often exist and a detailed examination of the genital tract must be made before and during the operation. Moreover, improved survival time would probably be achieved if accurate diagnosis and aggressive treatment, including cytoreductive surgery and chemotherapy are applied in advance.

Acknowledgement:
We appreciate gynecologic department and Dr. K. Khodadadi and Dr. M. Mehrabian who help us with advanced research and drafting.

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