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Uterine Carcinosarcoma (Mixed Mullerian Malignancy) in Postmenopausal Women: A Case Report

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Abstract

Carcinosarcoma, also known as malignant mixed Mullerian tumour, is an extremely rare and particularly aggressive tumour affecting the uterine body. This cancer mainly affects post-menopausal women and is often detected following post-menopausal metrorrhagia. Hysterectomy accompanied by bilateral salpingo-oophorectomy constitutes the prevailing treatment option; however, the occurrence of high rates of recurrence and metastases indicates the necessity for lymphadenectomy and postoperative adjuvant treatment. There is an absence of established consensus guidelines for the management of patients receiving treatment.

Keywords: Malignant Mixed Mullerian Tumours, Carcinosarcoma, Post-Menopausal Metrorrhagia

Abbreviations: FIGO: Federation of Gynaecology and Obstetrics, CS: Carcinosarcoma, EB: Endometrial Biopsy

Introduction

Carcinosarcoma, also known as malignant mixed Mullerian tumour, is an extremely rare and particularly aggressive tumour affecting the uterine body. It consists of malignant epithelial and mesodermal elements derived from the same precursor cell **[1]**. This type of tumour accounts for between 2 and 4% of malignant uterine cancers **[2]**. It is twice as common in black women as in white women **[3-5]**. This cancer mainly affects post-menopausal women and is often detected following post-menopausal metrorrhagia. The prognosis is generally poor, with a five-year survival rate estimated at between 30% and 50% **[4,6,7]**. The treatment of choice is mainly surgical. However, there is currently no consensus on adjuvant treatment for this condition. The main prognostic factor remains the stage of the tumour according to the International Federation of Gynaecology and Obstetrics (FIGO) classification **[4,8]**. Given the rarity of this tumour, few studies have been conducted specifically on uterine carcinosarcomas. Our aim in this article is to raise awareness among hospital practitioners of the importance of early diagnosis and to present the various treatment options available. We report a case of 63-year-old women with the diagnosis of endometrial carcinosarcoma (malignant mixed Mullerian tumour) revealed by post-menopausal metrorrhagia.

Observation

Mrs R.S, 63 years old, married, mother of two children born vaginally, menopausal for 15 years, with no particular personal or family pathological history, consulted for post-menopausal metrorrhagia which had been developing for 2 months, with no associated urinary or digestive signs, all evolving in a context of conservation of general condition. The gynaecological examination revealed minimal bleeding of endo-uterine origin on speculum examination, followed by a large uterus and a normal cervix on vaginal examination. The inguinal lymph nodes were free; the breast examination was unremarkable. On pelvic ultrasound, the uterus was globular with thickened endometrial tissue measuring 25 mm. Pelvic magnetic resonance imaging was ordered, showing endometrial thickening measuring 34 mm in T1 hyposignal, with discrete T2 hypersignal enhancement after injection of Gadolinium, with no invasion of the myometrium, isthmus or cervix (FIGO stage IA). There were no abnormalities in the cervical smear.

A diagnostic hysteroscopy revealed a suspicious-looking intra-cavity mass occupying the entire uterine cavity, and the biopsy came back in favour of an embryonic-type Rhabdomyosarcoma, hence the decision to proceed with a total hysterectomy without adnexal preservation. Pathological examination of the hysterectomy specimen showed endometrial carcinosarcoma (malignant mixed Mullerian tumour) extending to the surface of the isthmus and cervix without infiltration of the chorion, infiltrating the inner third of the myometrium (pT1a). The carcinomatous component (40%) was endometroid grade 3 with the presence of vascular emboli.

Discussion

Carcinosarcoma (CS) is an extremely rare tumour, and its risk factors have not been widely studied. However, certain factors have been identified as increasing the likelihood of developing this pathology, such as previous pelvic irradiation, prolonged exposure to oestrogens, use of tamoxifen, and African American race **[1]**. Uterine carcinosarcoma mainly affects postmenopausal women, being generally diagnosed after the age of 60 **[6,9-11]**, with an incidence that increases with age **[9]**. However, exceptional cases of uterine carcinosarcoma have been reported in younger women.

In terms of symptoms, CS is often manifested by metrorrhagia. However, this tumour may also present with pelvic pain or a feeling of heaviness, or more rarely a mass externalised through the cervix **[2]**.

However, there are no symptoms specific to this condition. A histological diagnosis of carcinosarcoma prior to surgery is crucial to ensure optimal treatment. However, endometrial biopsy (EB), biopsy curettage and biopsies of externalized lesions have a significant false-negative rate: 5-75% of preoperative histologies do not suggest any malignancy **[3,12]**, which is why hysteroscopy with directed biopsies is recommended for any postmenopausal metrorrhagia where EB is negative. MRI can also help to support the diagnosis. In our patient, we performed a diagnostic hysteroscopy with directed biopsy, which revealed an embryonal type of rhabdomyosarcoma, followed by a total hysterectomy with bilateral adnexectomy, which was concluded to be a uterine carcinosarcoma.

According to the 2019 NCCN recommendations, the initial management of carcinosarcoma includes performing peritoneal cytology, total hysterectomy without adnexal preservation, pelvic lymphadenectomy, peritoneal biopsies and omentectomy. It is usually recommended not to fragment the uterus during removal in cases of cancerous endometrial pathology, although this approach has not been clearly validated by studies.

Several studies have shown that some patients initially classified as stage I prior to surgical staging have extra-uterine extension (to lymph nodes and the peritoneum). Extension rates vary from 31% to 62% depending on the study **[8,13,14]**. Lumbo-aortic lymphadenectomy is generally only performed if pelvic curage is positive. However, Park et al **[14]** recommend systematic pelvic and lumbo-aortic lymphadenectomy. Their study showed that 50% of patients with positive nodes on pelvic curage also had positive lumbo-aortic nodes, while 7% of patients with negative pelvic curage had positive nodes on lumbo-aortic curage. In a series of 1855 cases of stage I to III uterine cancer, Nemani et al. found that overall survival was increased in patients who had undergone pelvic lymphadenectomy.

There is currently no consensus on adjuvant treatments for carcinosarcoma. Some studies suggest a benefit in terms of overall survival when pelvic radiotherapy is administered **[12,15]**, while others observe a beneficial effect of radiotherapy only on local recurrence of the disease **[8,16,17]**. Only one randomised study has compared surgical treatment alone with surgical treatment combined with external pelvic radiotherapy. This study, involving 91 cases of carcinosarcoma over a 13-year period, concluded that pelvic radiotherapy reduced the rate of local recurrence but had no impact on overall patient survival **[17]**. However, due to the poor prognosis associated with this disease, adjuvant radiotherapy is usually recommended **[18]**.

As for chemotherapy, Gonzalez Bosquet et al **[19]** reported a benefit of platinum-based adjuvant chemotherapy on overall survival. In addition, a recent study suggested a slight superiority of chemotherapy (combining Cisplatin, Ifosfamide and Mesna) over total abdominal radiotherapy in terms of reducing recurrence and overall survival **[7]**, although this difference was not statistically significant. Menczer et al. compared three groups of patients: the first receiving adjuvant chemotherapy alone (Ifosfamide + Cisplatin), the second pelvic radiotherapy alone, and the third chemotherapy followed by pelvic irradiation. Their results showed a significant reduction in mortality in the sequentially treated group compared with the group receiving chemotherapy alone, and a non-significant reduction compared with the group treated with radiotherapy alone **[6]**. Finally, a recent phase II study conducted by the Gynaecologic Oncology Group demonstrated the efficacy of the carboplatin-paclitaxel combination for the treatment of SC **[20]**.

The main prognostic factor in carcinosarcoma is the surgical stage of the tumour **[4,8]**. It is therefore essential to make an accurate diagnosis before any treatment in order to perform a complete surgery, which is crucial for improving the prognosis of patients with carcinosarcoma.

Other factors, such as age, histological grade, whether the tumour is homologous or heterologous, and the thickness of myometrial invasion, have been studied, but their impact remains controversial. Uterine carcinosarcomas are often diagnosed at an advanced stage, although some studies suggest that between 40% and 60% of CS are diagnosed at stage I or II **[11,12]**. In our case, the patient presented with a carcinosarcoma classified as FIGO stage IA. Five-year survival varies between 30 and 50% depending on the series, all stages combined **[4,6,7]**.

Conclusion

Uterine carcinosarcoma is a rare tumour with a poor prognosis, occurring mainly in postmenopausal women. Preoperative diagnosis is crucial for optimal management. The first-line treatment remains surgery. However, there is no consensus on adjuvant treatment. Chemotherapy has shown some efficacy in treating this type of tumour, while the indication for radiotherapy needs to be assessed on a case-by-case basis. Prospective randomised studies are needed to determine more precisely the most appropriate adjuvant treatment.

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