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Carcinosarcoma Endometrium-A Rare Case Report

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Abstract: ***Uterine carcinosarcoma is a highly aggressive, biphasic tumor composed of both epithelial and mesenchymal elements derived from a monoclonal origin. Total abdominal hysterectomy and bilateral salpingo oophorectomy is the main stay of treatment. High rates of loco regional and systemic recurrence have been seen needing lymphadenectomy and postoperative chemo and radio therapy.There are no specific guidelines for the treatment of carcinosarcoma endometrium. Though not proven radio and chemotherapy helps in improved surgical and minimal loco regional disease.***

Keywords: Uterine Carcinosarcoma, Total abdominal hysterectomy, Bilateralsalpingo oophorectomy, Chemotherapy

1. Introduction

Carcinosarcoma also known as Malignant Mixed Mulleriantumour is a mixed tumour of epithelial and mesenchymacells.It constitutes of about 3-4% of all uterine malignancies[1]. It can arise in any organ such as vulva, vagina, cervix, endometrium, and ovary or in the fallopian tube. Occur in postmenopausal women with a median age of occurrence being 62 years.

2. Case Report

A 67 year old nulliparous lady came with complaints of postmenopausal bleeding since 2 months On examination uterus was of 16 weeks size, on bimanual examination uterus was 16 weeks size, transmitted mobility present, fornices free, no fornicial tenderness. USG done revealed a large heterogenous lesion of 11*10*7 cm with cystic areas, arising from the uterine fundus- likely fibroid. Rest of the uterus is atrophic andendometrium is poorly visualised. Hisopathology of endometrial biopsyspecimen showed poorly differentiated endometrial carcinoma, thus proceeded to staging laparotomy with total abdominal hysterectomy and bilateral salpingo –oophorecomy with Infracolicomentectomy . Intra operatively uterus was 16 weeks size. Tubes and ovaries normal. Lymph node dissection could not be done.

On c/s of uterus - 15*10 cm growth filling the endometrial cavity was seen. HPE of specimen suggested carcinosarcomaendomerium with no myometrial involvement, Stage IA. Medical oncology opinion taken and was adviced two cycles of chemotherapy with cisplatin and paclitaxel.

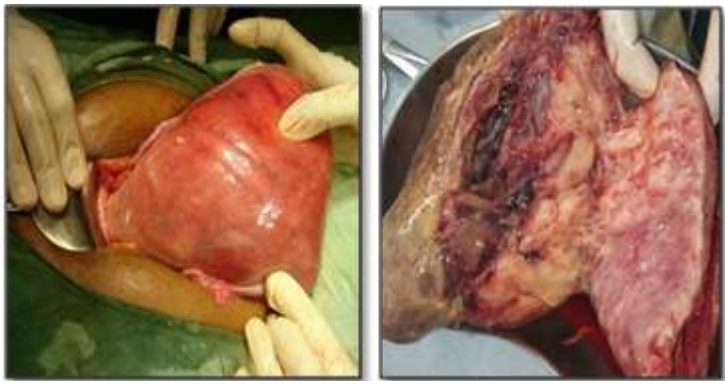
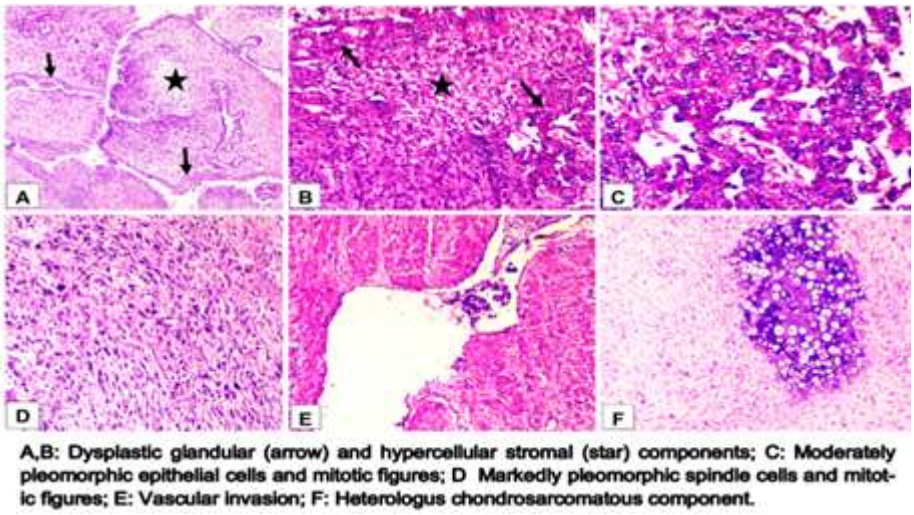


Figure 1: Intra operative findings



A,B: Dysplastic glandular (arrow) and hypercellular stromal (star) components; C: Moderately pleomorphic epithelial cells and mitotic figures; D Markedly pleomorphic spindle cells and mitotic figures; E: Vascular invasion; F: Heterologus chondrosarcomatous component.

Figure 2: Microscopic findings

3. Discussion

Genetically carcinoma and sarcoma are the same based on X chromosome inactivation pattern and TP53 hot spot mutation sequencing studies[2,3]. Sarcomatous componentmay be homologous if it has normal endometrial stroma or heterologous if it has cartilage, bone or striated muscle. Carcinosarcoma is supposed to arise from totipotent endometrial stromal cells. Varous mechanisms have been proposed for the development of carcinosarcoma[4, 5].

1) The collision theory suggests that the two components had separate points of origin prior to their "colliding" together to form a single tumour.
2) The combination theory postulates that a common stem cell precursor undergoes bidirectional differentiation that results in the creation of the two histological types.
3) In conversion theory, a single epithelial component is hypothesized to undergo metaplastic differentiation from which the mesenchymal component is derived.

Etiological factors include pelvic exposure to irradiation, obesity, nulliparity, and exposure to the human papilloma virus or exogenous estrogen

Protective Factors
Oral contraceptive pills and smoking are the protective factors.

Clinical Features
The most frequent presenting symptom are post-menopausal bleeding. Other features are vaginal discharge, abdominal or pelvic pain, weight loss and passage of tissue from the vagina[6]. On examination, uterine enlargement is seen in about 50-95% of patients and a polypoidal mass arising from the endocervicalcanalis seen in about 50% patients[7]. The tumor grows as a large, soft polypoidal mass, filling and distending the endometrial cavity, necrosis and haemorrhage are the prominent features. Myometrium is invaded in almost all cases. Most frequent are of spread to the pelvis, lymph nodes, peritoneal cavity, lungs and liver. Carcinosarcoma spreads by local extension and by lymphatic spread. It is a more aggressive tumor.

Treatment
The primary treatment option remains surgery. Total abdominal hysterectomy and bilateral salpingo-oopherectomy is the preferred standard surgical option. The current practice is surgical staging with TAH with BSO, pelvic and para aortic lymph node sampling with peritoneal washings[8]. Three arguments have been put forward in favour of lymphadenectomy (a): accurate staging will allow the determination of the patient's true metastatic risk, (b): possible reduction in locoregional recurrences with in the lymph nodes and(c): improving selection of patients for adjuvant therapy. Lymphadenectomy offers a surgical advantage only for node negative patients, as removal of positive nodes upstages the disease and worsens the prognosis. A multimodal treatment plan has been suggested, surgery followed by a combination of both radiotherapy and chemotherapy yields a significantly longer median disease-specific survival of 31 months versus surgery alone (3 months), radiation therapy alone (15 months), or chemotherapy alone (14 months) [9]. Radiotherapy contributes to decrease pelvic recurrence but its impact on overall survival rate is controversial. Pelvic radiation does not eliminate pelvic relapse Extra pelvic recurrence/relapse is common with hematogenous, transcoelomic, and lymphatic spread of tumor; therefore chemotherapy has a definitive role to minimise both local and distal failure[10, 11]. Chemotherapy response rate in patients with a predominant carcinomatous element yielded a better overall response rate than those with a dominant sarcoma. For stage 1\2 lesions chemotherapy is considered as an adjuvant therapy and as a palliative treatment for advanced cases. Active single cytotoxic antineoplastic agents include ifosfamide, cisplatin, doxorubicin and paclitaxel. Combination chemotherapy have a 50% higher response rate than with a single chemotherapeutic agent. Platinum based chemotherapies coupled with DNA alkylating agents with activity against sarcoma.

Recurrences and Metastases
Recurrences occur in about over half of patients after primary surgery and adjuvant therapy[12]. Factors that increase the risk of recurrence include patient age, adnexal spread, metastases to lymph nodes, tumor size, Lymphatic vascular space involvement, hisological grade, cell type peritoneal

cyologic findings and the depth of invasion of primary tumor. Most recurrences occur within one year[9]. Local recurrences to the pelvis and abdomen are most often the cause of death in patients with uterine carcinosarcoma than meastatic disease. Recurrence or metastatic disease are often treated by chemotherapy.The most important prognostic factor in carcinosarcoma endometrium is depth of myometrial invasion.

4. Conclusion

Uterine carcinosarcoma is a rare, highly aggressive, rapidly progressive neoplasm associated with a poor prognosis. Treatment of carcinosarcoma endometrium is multidisciplinary approach of surgery, radiotherapy and potentially evolving specific systemic therapy with targeted anti neoplastic pharmacological interventions.

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