Case Report
Carcinosarcoma of uterine corpus – A case report

Narendra R Patil1, Uttara K Aloorker1,*
1 Dept. of Pathology, Vilasrao Deshmukh Government Institute of Medical Sciences (Formerly Government Medical College, Latur), Latur, Maharashtra, India

A R T I C L E I N F O
Article history:
Received 16-06-2021
Accepted 10-08-2021
Available online 13-09-2021

Keywords:
Carcinosarcoma
Histopathology
Malignant Mixed Mullerian Tumour
Uterus

A B S T R A C T
Uterine carcinosarcomas comprise a distinct rare entity of uterine malignancy with a very aggressive nature and poor prognosis. They make up to less than 5% of all uterine cancers. We report a case of 45yr old lady who presented with the complaint of vaginal bleeding since two months and was a known case of dysfunctional uterine bleeding. Postoperative histopathological examination of the hysterectomy specimen revealed the diagnosis of uterine carcinosarcoma.

This is an Open Access (OA) journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: reprint@ipinnovative.com

1. Introduction
Uterine carcinosarcomas also known as malignant mixed Mullerian tumours of uterus are rare and very aggressive malignancies and are most common of uterine sarcomas.1,2 They make up to less than 5% of all uterine cancers.1–3 It is a biphasic neoplasm comprising of both carcinomatous and sarcomatous components2,4 and a poor prognosis. They mostly affect postmenopausal women and are managed surgically.

2. Case Report
A 45 year old female, known case of dysfunctional uterine bleeding, presented with per vaginal bleeding since 2 months.

Per Speculum & Per Vaginal Examination – Bulky uterus.

Ultrasonography revealed an ill-defined tissue mass of about 3 x 2 cm size in uterine body suggesting a possibility of neoplastic aetiology.

Post operatively we received hysterectomy specimen for histopathological evaluation.

Grossly, uterus with cervix measured 8 x 6.5 x 3 cm. Cut surface showed grey-white polypoidal mass projecting in uterine cavity; measuring 3x 2cm and was firm in consistency and was gritty to cut (Figure 1). Few haemorrhagic areas were also noted.

Light microscopy of the mass showed a heterogenous malignant neoplasm with biphasic pattern. The epithelial element was endometroid type and the heterologous mesenchymal element showed cartilaginous differentiation and sarcomatous change (Figures 2 and 3). The final histopathological diagnosis was uterine carcinosarcoma.

3. Discussion
Carcinosarcoma is a rare malignant tumour of uterus with a poor prognosis. It is a biphasic neoplasm comprising of both carcinomatous (epithelial tissue) and sarcomatous (connective tissue) component. Gebhardt in 1899 appears to have reported the first case of carcinosarcoma of uterus.2 Synonyms of carcinosarcoma in literature include “malignant mixed Mullerian tumour ”, “malignant mesodermal mixed tumour ” and “metaplastic
Uterine carcinosarcoma accounts for 4.3% of all uterine corpus cancers. Exposure to radiation, excessive oestrogen exposure, obesity and nulliparity are believed to be associated with carcinosarcoma development. The various other sites where it has been identified are vagina, cervix, ovary and most rarely fallopian tubes (in decreasing order of frequency). There are multiple theories with respect to histogenesis of uterine carcinosarcoma as follows:

1. The collision theory, according to which the carcinoma and sarcoma are two independent neoplasms.
2. The combination theory suggests that the single stem cell that gives rise to the tumour components undergoes divergent differentiation during the early phase of the tumour evolution.
3. The conversion theory which says that the sarcomatous element derives from the carcinoma during the tumour evolution.

The currently accepted theory is the ‘conversion theory’: that uterine carcinosarcoma originates from the metaplastic transformation of a single cell.

Carcinosarcomas occur mainly in women ~15-17 years after menopause with vaginal bleeding, abdominal pain and uterine enlargement and or polypoid mass in an older patient. The symptom triad indicative of carcinosarcoma rather than endometrial adenocarcinoma include pain, severe vaginal bleeding and the passage of necrotic tissue per vaginum. The diagnosis is most often made post hysterectomy on histopathological examination and immunohistochemistry.

Uterine carcinosarcoma’s gross histological appearance is usually that of a solitary polypoid mass with regions of haemorrhage and necrosis, projecting into the uterine cavity. Gritty or hardened areas may suggest osseous or cartilaginous differentiation. In half of the patients a polypoid mass within the endocervical canal is present. Uterine carcinosarcomas usually arise from the posterior uterine wall and is large and soft; may be fleshier and bulker due to sarcomatous differentiation.

The characteristic features of malignant mixed Mullerian tumour on light microscopy are a mixture of carcinomatous and sarcomatous elements resulting in a biphasic pattern. The epithelial component of a carcinosarcoma may be of any type of Mullerian carcinoma: mucinous, squamous, serous, endometrioid, high grade papillary, clear cells, undifferentiated or a mixture of these the appearance of sarcomatous component is the basis of the division of these neoplasms into homologous (leiomyosarcoma, stromal sarcoma and fibrosarcoma) and heterologous varieties (chondrosarcoma, rhabdomyosarcoma, osteogenic sarcoma, liposarcoma). In our case the epithelial component was endometrioid type with glandular pattern and the carcinoma.2
heterologous component showed chondrosarcomatous (cartilaginous) differentiation. Carcinosarcomas express epithelial (EMA, Pan cytokeratin) and stromal lineage markers with respect to their histology.⁴,⁹

These tumours are characterized by aggressive clinical course and extremely poor prognosis. It is the epithelial component that usually metastasizes and recurs.¹ At present recommended surgical treatment is total abdominal hysterectomy with bilateral salpingo-oophorectomy, infracolicomectomy, pelvic lymphadenectomy and para-aortic lymph node sampling with peritoneal washing.¹⁰ Adjuvant chemoradiation is recommended in most cases but there is no measurable survival benefit.⁹

4. Conclusion
Uterine carcinosarcomas are rare tumours with aggressive nature and poor prognosis and accurate histopathological diagnosis can aid in better patient management.

5. Conflict of Interest
There is no potential conflict of interests related to the exclusive nature of this paper.

6. Source of Funding
No financial support was received for the work on this manuscript.

References
1. Cantrell LA, Blank SV, Duska LR. Uterine Carcinosarcoma: A Review Of The Literature. Gynecol Oncol. 2015;137(3):581–8. [doi:10.1016/j.ygyno.2015.03.041]
2. Ranjan DS, Surendar J, Swamy AR, Manjunatha H. Malignant Mixed Mullerian Tumour Of Uterus (Uterine Carcinosarcoma ) : A Case Report. IOSR J Pharm. 2013;3(9):49–52.
3. Adachi Y, Nonogaki H, Minamiguchi S, Li M, Ikehara S. Susumu Ikehara. Carcinosarcoma of Uterus A Rare Case Report. Mol Clin Oncol. 2016;4(4):571–3. [doi:10.1016/j.mclon.2016.04.004]
4. Tekwani D, Joshi S, Pathak S. Malignant Mixed Mullerian Tumour Of The Uterus : A Case Report. Indian J Basic Applied Med Res. 2013;1(3):33–6.
5. McCluggage WG. Uterine carcinosarcomas (Malignant mixed mullerian tumours) are metaplastic carcinomas. Int J Gynecol Cancer. 2002;12(6):687–90.
6. Kernochan LE, Garcia RL. Malignant Mixed Mullerian Tumour) Of The Uterus : Advances In Elucidation Of Biologic And Clinical Charactheristics. J Natl Compr Cancer Netw. 2009;7(5):550–6.
7. El-Nashar SA, Mariani A. Uterine Carcinosacroma. Clin Obstet Gynecol. 2011;54(2):292–304.
8. Lam KY, Khoo US, Cheung A. Collision Of Endometrioid Carcinoma And Stromal Carcinoma Of Uterus : A Report Of Two Cases. Int J Gynecol Pathol. 1999;18(1):77–81.
9. Kanthan R, Jenna-Lynn S. Uterine carcinosarcomas (malignant mixed mullerian tumours): a review with special emphasis on the controversies in management. Obstet Gynecol Int. 2011;470795. [doi:10.1155/2011/470795]
10. Chandra C, Shekhar S, Panda SR, Priyadarshini P, Bhandari N, Saumya Ranjan Panda Et Al. Malignant Mixed Mullerian Tumour Of Uterus: Rare Case And Rarer Diagnosis. Indian J Obstret Gynecol Res. 2016;3(1):76–7.

Author biography
Narendra R Patil, Professor
Uttara K Aloorker, Junior Resident @ https://orcid.org/0000-0002-4655-4215

Cite this article: Patil NR, Aloorker UK. Carcinosarcoma of uterine corpus – A case report. IP J Diagn Pathol Oncol 2021;6(3):234-236.