ORIGINAL RESEARCH PAPER
Volume - 13 | Issue - 01 | January - 2024 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr
INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

SYNCHRONOUS OVARIAN CLEAR CELL CARCINOMA AND CARCINOSARCOMA OF ENDOMETRIUM- A RARE CASE REPORT

Pathology

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ABSTRACT

Carcinosarcoma previously called as Malignant Mixed Mullerian tumour comprised of both malignant epithelial and mesodermal components. It is an aggressive tumour with poor prognosis that constitute for about 2-5% of all uterine malignancies. Clear cell carcinoma comprises of 5-25% of ovarian cancers. Herein we present a rare case of a 63 year old obese female with P8L8 presented with chief complaints of postmenopausal bleeding and pain abdomen since one month. Gross examination showed left ovarian mass measured 15x12x6cm. Endometrial cavity was distended with grey white friable polypoidal mass extending into the cervix and then protruding through the os. Microscopy from left ovarian mass showed tumour arranged predominantly in tubulocystic and papillary pattern. Tumour cells are cuboidal to polyhedral with clear to eosinophilic cytoplasm. Microscopy from endometrium showed biphasic tumour composed of carcinomatous and sarcomatous components. It was diagnosed as a rare association of clear cell carcinoma of ovary with carcinosarcoma of endometrium.

KEYWORDS

Clear cell carcinoma ovary, Carcinosarcoma endometrium

INTRODUCTION

Carcinosarcoma previously called as Malignant Mixed Mullerian tumour comprised of both malignant epithelial and mesodermal components. It is an aggressive tumour with poor prognosis that constitute for about 2-5% of all uterine malignancies. It is more frequent between 5th to 7th decades of life (1). The common genetic association with this tumour involves p53, PTEN and FBXW7.Risk factors for carcinosarcoma were increased oestrogen levels, obesity, nulliparous and tamoxifen usage (2). Clear cell carcinoma of ovary was originally described as mesonephroma which comprised of clear and hobnailed cells with an immature glomerular pattern. It comprised of 5-25% of ovarian cancers. It tends to present at initial stages and is associated with endometriosis. Young age, advanced stage of disease and vascular invasion were considered as poor prognostic factors (3). Herein we report a rare case of clear cell carcinoma of ovary with carcinosarcoma of endometrium

CASE REPORT

A 63 year old obese female with P8L8 presented with chief complaints of postmenopausal bleeding and pain abdomen since one month. The patient is a known case of diabetes and hypertension since 5 years. On abdominal examination vague mass was felt at infraumbilical region. Per speculum examination showed an exophytic polypoidal growth projecting through the os. Ultrasound abdomen showed a left adnexal mass lesion suspecting malignancy with thickened endometrium of 38mm.CECT abdomen and pelvis showed a heterogeneously enhancing left adnexal mass lesion with thickened heterogeneously enhancing endometrial lesion with polypoidal cervical canal/vaginal extension. Pouch of Douglas showed lesions with mild post contrast enhancement. Small focus of omental fat stranding in the hypogastric region noted. Debulking surgery was performed.

On gross examination left ovarian mass measured 15x12x6cm.Cut surface showed predominantly solid areas with focal cystic areas. Endometrial cavity was distended with grey white friable polypoidal mass extending into the cervix and then protruding through the os as a globular mass (Figure 1)

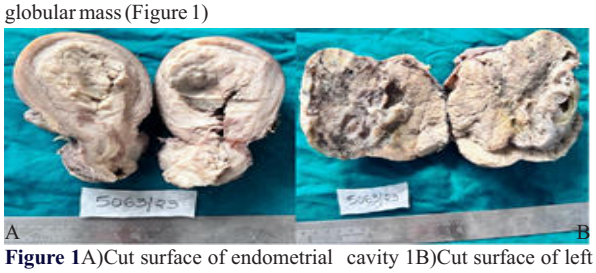

Figure 1A)Cut surface of endometrial cavity 1B)Cut surface of left ovarian mass

Microscopy from left ovarian mass showed tumour arranged predominantly in tubulocystic and papillary pattern. Tumour cells are cuboidal to polyhedral with clear to eosinophilic cytoplasm(Figure 2).

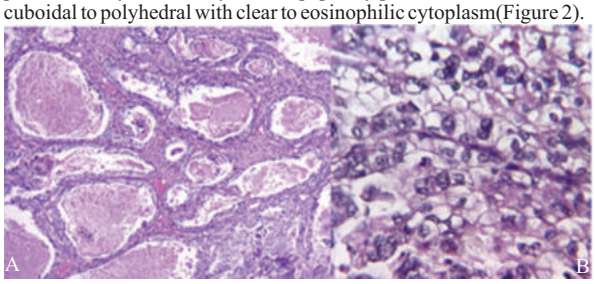

Figure 2 A)Tubulocystic pattern in ovary(H & E,100X) 2B)Tumor cells with clear cytoplasm(H & E,400X)

Microscopy from endometrium showed biphasic tumour composed of carcinomatous and sarcomatous components. Carcinomatous components show serous differentiation. Bizarre tumour cells and lymphvascular invasion identified. Numerous mitotic figures noted. Tumour involved cervix, right ovary and right fallopian tube. A diagnosis of clear cell carcinoma of left ovary with carcinosarcoma of endometrium was given (Figure 3).

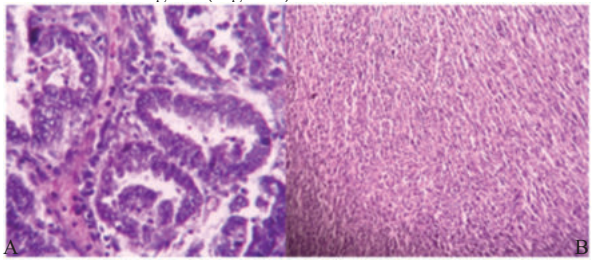

Figure 3A)Carcinomatous component(H & E,400X) 3B)Sarcomatous component(H & E,100X)

DISCUSSION

It is an extremely rare case of coexistence between clear cell carcinoma of ovary with Carcinosarcoma of endometrium. No cases have been reported previously in the literature. Other cases in literature included a case report of 65 year old lady with occurrence of clear cell carcinoma right ovary and left ovarian endometrioid carcinoma. Also reported a case of 38 year old female who had right ovarian serous papillary carcinoma and left ovarian clear cell carcinoma. The incidence of primary synchronous malignancies of genital tract varies between 0.7%-1.5%.Independent primary tumors of endometrium and

ovary are the most commonly encountered synchronous tumours in female genital tract(4) .Santoro et al reported the case of simultaneous occurrence of clear cell carcinoma of ovary with low grade endometrial stromal sarcoma in a 62 year old female(5).

Carcinosarcomas have four theories regarding the cellular origin. The first is collision theory which presumes two tumours merge to form single tumour. Second is composition theory that is mesenchymal component is a pseudosarcomatous response to epithelial malignancy. Third is combination theory which shows both epithelial and mesenchymal component originate from a common pleuripotent stem cell. The fourth is conversion theory which contends that the sarcomatous component of the tumour is a metaplastic sarcomatous transformation of epithelial component (6).Patients with carcinosarcoma usually present with pyometra, vaginal bleeding and abdominal pain. On physical examination 50-95% patients have bulky uterus with half of them protruding through the endocervical canal as polypoidal lesion similar to this case. The triad of symptoms includes severe vaginal bleeding, pain and passage of necrotic tissue per vagina(7).

Clear cell carcinoma of ovary is usually diagnosed at young age and in early stage. Certain gene alterations like AT rich interaction domain 1A(ARID1A) and phosphatidylinositol-4,5 biphosphate 3 kinasecatalytic subunit A(PIK3CA) are responsible for 50% cases of clear cell carcinoma.BRCA1,BRCA2 and p53 mutations are present in lower frequency in clear cell carcinoma(8).Clear cell carcinoma origin is from nonovarian mullerian type tissue. This tumour develops from endometriosis as a result of retrograde menstruation due to oxidative stress(4).

CONCLUSION

This case was a rare association of Clear cell carcinoma ovary and Carcinosarcoma endometrium. Each women with postmenopausal bleeding must be considered to have the potential of malignancy unless proved negative on histopathology(9).

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