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CLEAR CELL CARCINOMA OVARY: A RARE CASE PRESENTATION

Pathology

Kanwardeep Kaur Assoc Professor,Pathology Department, Guru Gobind Singh Medical college and hospital, Fardikot, Punjab

Manmeet Kaur* Assoc Professor,Pathology Department, Guru Gobind Singh Medical college and hospital, Fardikot, Punjab *Corresponding Author

Nisha Singla Postgraduate Resident,Pathology Department, Guru Gobind Singh Medical college and hospital, Fardikot, Punjab

Arshdeep Kaur Postgraduate Resident,Pathology Department, Guru Gobind Singh Medical college and hospital, Fardikot, Punjab

ABSTRACT

Ovarian tumours are common neoplasia in women all over the world. Out of all the ovarian cancers Clear cell carcinoma of ovary is a rare epithelial tumour and accounts for only 5 to 10% of all the ovarian epithelial malignancies. We in this case report present a case of clear cell carcinoma ovary in 40 year old women.

KEYWORDS

Clear Cell Carcinoma Ovary, Epithelial Malignancies.

INTRODUCTION

The ovarian tumours are common form of neoplasia in women and accounts for approx. 30% of female genital cancers.[1] Asian countries have an incidence of 2-6 new cases per 1,00,000 women per year.[2] The World Health Organization histological classification for ovarian tumours is: surface epithelial, germ cell, sex cord-stromal , metastases and miscellaneous.[3] The surface epithelial ovarian carcinoma is the most lethal gynecologic malignancy.[4] It consists of different histological subtypes including high-grade serous, clear cell, endometrioid, low-grade serous, and mucinous carcinomas.[5] Ovarian clear cell carcinoma is the uncommon subtype representing 5% to 10% of all epithelial ovarian carcinomas in North America.[6] Clear cell carcinoma ovary occurs in postmenopausal women in their fifth to sixth decade. On Immunohistochemistry clear cell adenocarcinoma of ovary is positive for HNF-1β, EMA, Cytokeratin7 and Napsin.

Case Presentation

A 40 year old woman presented to Gynae OPD with complaint of menorrhagia, pain and mass per abdomen since one and half year. On ultrasonography diagnosis of a retroverted uterus, with well defined hypoechoic SOLs are noted intramurally in both anterior and posterior myometrium measuring 15x10mm and 17x13mm suggestive of fibroids. Right ovary was defined as having cystic area measuring approx. 10x7x4cm alongwith evidence of solid echotexture showing increased vascularity suggesting the possibility of malignant eitiology. The patient was operated and specimen was sent to our pathology department. The CA-125 levels of the patient were 30.2 U/ml. On gross examination: Uterus with cervix measures 9x5.5x3 cm and the ovarian mass in pieces collectively measures 9x8x4cms. The cut section of uterus showed small fibroids and the cut section of ovarian mass shows greyish – white solid areas alongwith cystic areas filled with mucoid material. Microscopic examination of ovarian mass shows a cellular tumour arranged in tubulocystic pattern.(figure 1) The individual tumour cell is large with high nucleo-cytoplasmic ratio and moderate amount of eosinophilic and clear cytoplasm.(figure 2) Prominent hobnailing is also noted. The diagnosis of Malignant epithelial tumour possibly, Clear Cell Adenocarcinoma was made.

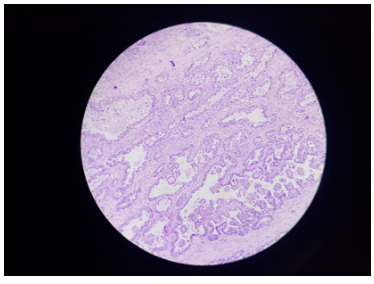

FIGURE 1

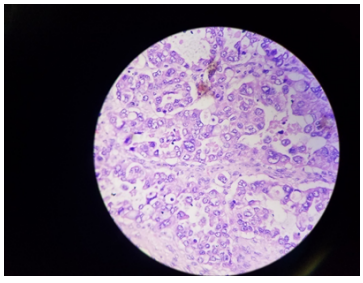

FIGURE 2

DISCUSSION

Clear Cell Carcinomas of ovary are malignant epithelial ovarian tumours. They are uncommon epithelial ovarian malignancies occurring in post menopausal women. In the study of Behbakht et al. on the clinical characteristics of clear cell carcinoma of the ovary, the median age was 55 years (range 31–80 years).[7] The age of our patient is even lower than the age of patients in that study. 20% of the ovarian clear cell carcinoma is malignant tumours arising from underlying ovarian endometriosis.[8] Unopposed estrogen stimulation in endometriosis is one of the factors for malignant transformation of endometriosis.[9] Clear cell ovarian tumours have been referred to as "endometriosis- associated ovarian cancers." Several cases have been reported proving this association as in a study by Scarfone G etal.[10] It concludes that endometriosis per sec does not appear to be associated with or does not predict prognosis in ovarian clear cell cancers. Penson RT etal, found that only a subset of clear cell cancers evolve from endometriosis and that the oxidative stress conditions found within endometriotic lesions are likely to contribute to the transformation process.[11] Association of clear cell tumours with endometriosis is six times as great as with ovarian carcinomas in general, but cases without endometriosis also exist.[12] In this case report we have also reported a case of clear cell adenocarcinoma ovary in 40 year old women which was not associated with endometriosis. Moreover, clear cell adenocarcinoma ovary being a epithelial ovarian carcinoma is associated with raised CA-125 levels but our case was not found to be associated with raised CA-125 levels.

CONCLUSION

We have reported a rare case of clear cell carcinoma ovary which was not associated with evidence of endometriosis and raised CA-125 level.

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