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Case Report

Mixed cell adenocarcinoma of uterus: A case report

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ABSTRACT

Here we present a case of a 40-year old obese female admitted with the complaint of lower abdominal pain, pain during sexual intercourse and irregular menstruation. The transabdominal ultrasonography showed increased endometrial thickness. Histopathological examination showed (clear cell adenocarcinoma, endometroid carcinoma with squamous differentiation) mixed cell adenocarcinoma which is a very rare case.

1. Introduction

Adenocarcinoma of endometrium is characterized by the presence of both type I and type II endometrial adenocarcinoma components. Type I is estrogen dependent and encompassing around 80–85% of the cases whereas type II is independent of estrogen and consists of serous carcinoma, clear cell change, and carcinosarcoma. Mean age of presentation is between 55-65 years. Endometrial adenocarcinoma is a common invasive malignancy of the female genital tract. Definitive diagnosis is made by histopathological examination.

2. Case History

Here we present a case of a 40-year old obese female (parity 2) who was admitted with the complaints of lower abdominal pain, pain during sexual intercourse and irregular menstruation. Her body mass index was 30. Our patient had no history of hormone intake. Transvaginal ultrasonography showed 20 mm of endometrial thickness. USG whole abdomen showed large well-defined rounded heterogenous, hypoechoic space occupying lesion with minimal vascularity suggestive of posterior myometrial fibroid. No radiological image was provided. Procedure performed was total abdominal hysterectomy and the specimen was sent for histopathological examination.

2.1. Pathological finding

Grossly, we received a total abdominal hysterectomy specimen (Figure 1) all together measured 13x9.5x8 centimeters. An attached cervical polyp measured 2x1.5 centimeters. The specimen was not inked, and no pelvic lymph nodes were sent. Histopathological examination showed section from the endometrium showed a tumor disposed in mainly papillary architecture having fibromuscular core lined by clear cells that are polygonal in shape, flat appearance having clear eosinophilic cytoplasm. There are areas of nests and trabeculae composed of atypical cells, focal areas of keratinization and eosinophilic keratin pearls. Section from myometrium showed fascicles of smooth muscle fibres invaded by tumor. Section from the cervical tissue showed endocervical glands lined by mucinous columnar epithelium. Focal areas showed transition to squamous epithelium within mucin

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secreting endocervical glands. Hence, according to latest WHO classification, it was diagnosed as- Mixed cell adenocarcinoma (clear cell carcinoma-70%, endometrioid carcinoma with squamous differentiation-30%). FIGO Type II, TNM category (pT2). Immunohistochemistry was not studied.

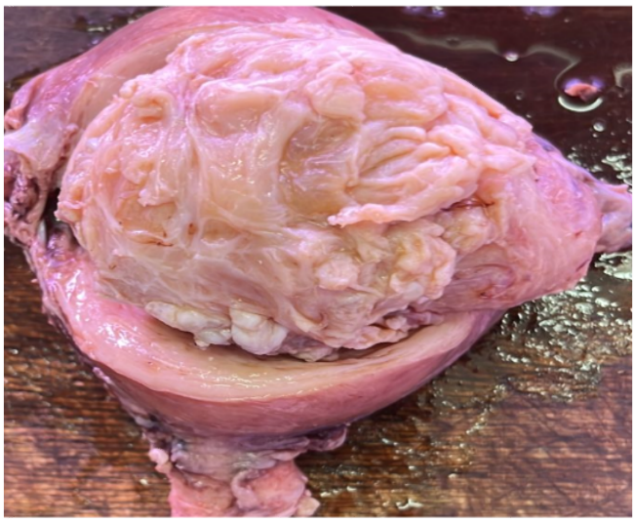

Fig. 1: Gross

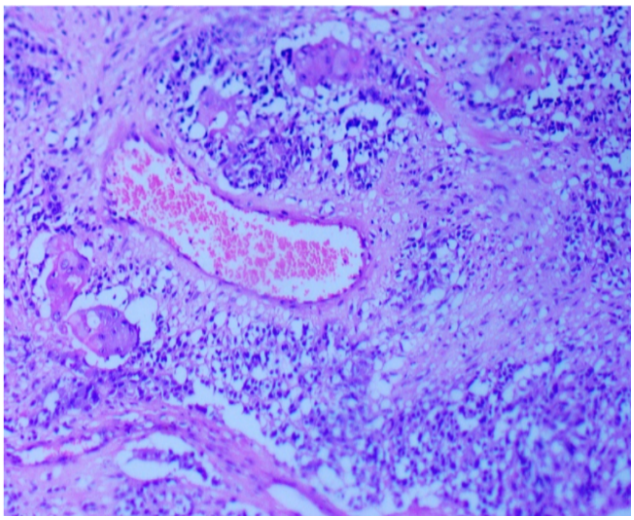

Fig. 2: Microscopy

3. Discussion

Endometrial carcinoma is of type I and type II. Type I endometrioid carcinoma are of low-grade and are usually indolent; type II endometrioid carcinoma are high-grade aggressive tumors and have a poor prognosis.[1] Microscopically, around 80% of endometrial malignant epithelial tumors are typical adenocarcinomas, which are categorized amongst well (grade 1, 50%), moderately (grade 2, 35%) and poorly differentiated (grade 3, 15%). A subset of ECs show mixed morphology, that is, an admixture of 2 different clearly identified subtypes, as in the case reported here. Endometrioid carcinoma is the commonest subtype of endometrial carcinoma and has several variants. The variants of endometrioid carcinoma are secretory carcinoma, villoglandular endometrioid carcinoma, endometrioid carcinoma with small nonvillous papillae, endometrioid carcinomas with microglandular and sertoliform patterns, endometrioid carcinomas with metaplastic changes and clear cell change, clear cell change which can raise the probability of clear cell carcinoma.[2] There be many causes for clear cell change in typical endometrioid carcinoma, the commonest being squamous metaplasia, secretory changes, and a true clear cell component. Recognition of squamous elements has diagnostic significance. Squamous differentiation may be mature or morular. Morular metaplasia occurs in endometrial hyperplasia and is believed to be the basis of the solid component in the rare morphological variant termed endometrioid carcinoma with spindle cells. All types of squamous differentiation commonly show cytoplasmic clearing. Distinction is facilitated by recognition of nearby typical squamous changes and a lack of tubuloglandular architecture. A second common reason for cytoplasmic clearing is secretory change. Intestinal metaplasia in primary endometrial carcinomas is quite uncommon. Endometrial carcinomas with intestinal-type features might present in pure or mixed forms in association with usual-type endometrioid carcinomas; and represent as more aggressive tumor variant. Uncommon growth patterns of endometrioid carcinomas involve adenomyosis. The four major molecular subgroups of endometrial carcinoma, as revealed by the cancer genome atlas, there are indications that such ambiguous tumors may fall into those groups with a high mutation rate: “ultramutated” (harbouring mutations in polymerase epsilon, POLE) or “hypermutated” (characterised by microsatellite instability). Immunohistochemistry has limited value in such a case. In western countries endometrial carcinoma is very common.[3] In 2022, a 41 year old woman was diagnosed to have dedifferentiated carcinoma of the uterus with prominent squamous metaplasia.[4,5] Another case of a 49 year old menopausal woman was diagnosed to have endometrial carcinomas with intestinal type metaplasia, had body mass index of 29, 2 of her second degree relatives were diagnosed with endometrial carcinoma whereas any such family history was absent in our patient.[6] In 2016 a case of 60 year old menopausal woman was diagnosed with mixed endometrioid and clear cell change endometrial carcinoma along with ovarian and peritoneal metastasis of the clear cell carcinoma component, the patient had clinical signs and symptoms of deep vein thrombosis, whereas our patient did

not present with any such symptom.[7] In the year 2019, 54 year old elderly woman had mixed adeno-neuroendocrine carcinoma with serosal carcinoma, but in our case there was no such components in the histology.[8,9]

4. Conclusion

Mixed cell adenocarcinoma is rare in women and is associated with poor outcome. Hence, it should be kept in mind while dealing with cases of endometrial growth. Poor prognosis and high morbidity, demands further research to improve the prognosis and reduce morbidities. As new therapies develop, accurate morphological classification of EC is becoming increasingly crucial for optimal patient management.

5. Source of Funding

None.

6. Conflict of Interest

None.

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