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Original Research Paper

Pathology

A CASE OF PRIMARY ENDOMETRIAL CLEAR CELL ADENOCARCINOMA MIMICKING A SUBMUCOUS LEIOMYOMA IN A PERIMENOPAUSAL FEMALE

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ABSTRACT Endometrial Clear Cell Adenocarcinoma typically occurs in the setting of Endometrial Atrophy in an elderly female with Post-Menopausal Bleeding, demonstrating papillary, tubulo-cystic, solid or mixed architectural pattern and pleomorphic polygonal, cuboidal, flat or hobnail cells with clear to eosinophilic cytoplasm. A 45years aged female presented with persistent abnormal uterine bleeding for last 6 months, not relieved on medication. Transvaginal Sonography revealed a large, well-defined, solid, hypoechoic mass with thickened endometrium whereas Gross Examination of Hysterectomy specimen showed a solitary, yellow-tan, well-circumscribed, large, smooth exophytic growth, 11 cm in maximum dimension, attached to uterus, obliterating entire endometrial cavity, typical of Submucous Leiomyoma. Sections from growth on Microscopy showed confluent glands and papillae, arranged in mixed tubulo-cystic and papillary pattern, lined by monolayered, pleomorphic, cuboidal, polygonal and hobnail cells with abundant clear to eosinophilic cytoplasm, prominent cell membrane, pleomorphic, atypical nuclei, prominent nucleoli, few mitotic figures along with unremarkable histology of Cervix, Bilateral Tubes and Ovary, diagnostic of Primary Clear Cell Endometrial Adenocarcinoma. Endometrial Clear Cell Adenocarcinoma may mimic a Leiomyoma on Sonography and Gross Examination. Diagnosis is made based on characteristic cellular morphology and architectural pattern on Histopathology. Although very rare, Primary Endometrial Clear Cell Adeno- Carcinoma should be kept in mind while evaluating Abnormal Uterine Bleeding in a Peri-menopausal female.

KEYWORDS : Endometrium, Clear Cell Adenocarcinoma, Eosinophilic cytoplasm

INTRODUCTION:

Clear Cell Adenocarcinoma of Endometrium is a high-grade, aggressive, oestrogen-dependent, Type 2 Endometrial Carcinoma[1] that occurs predominantly in the setting of Endometrial Atrophy[1][2] in an elderly female[1][2] (around 65 to 75 years) with Post-Menopausal Bleeding[1][2], typically presenting as a friable mass with an average size of 4 cm[3], associated with a poor outcome[4], occurring almost exclusively in post-menopausal females. Here we present a very interesting and rare case provisionally diagnosed to be a Leiomyoma on Ultrasonography and Gross Examination in a peri-menopausal female with Atypical Uterine Bleeding but later turns out to be a Primary Clear Cell Endometrial Adenocarcinoma on Histopathology.

CASE-REPORT:

A 45 years aged G3P3 peri-menopausal female presented with Persistent Abnormal Uterine Bleeding for the last 6 months, not relieved on medication. Clinical Examination revealed a non-tender, bulky uterus. Urine for Pregnancy Test was negative. Trans-Vaginal Sonography revealed a large 10 cm x 9 cm x 7.5 cm, well-defined, concentric, broad-based, hypoechoic mass with acoustic shadowing and an overlying layer of echogenic thickened endometrium, suggestive of a Submucous Leiomyoma. Total Abdominal Hysterectomy with Bilateral Salpingo-Oophorectomy was done. Gross Examination of the resected specimen (Fig1) showed a solitary, yellow-tan, well-circumscribed, large, exophytic growth with smooth surface, measuring 11 cm in greatest dimension, attached to the uterus, obliterating the entire endometrial cavity, typical of a Submucous Leiomyoma. Sections taken from growth on microscopy showed the presence of short rounded papillae and confluent glands, arranged in a mixed tubulo-cystic and papillary pattern (Fig2), lined by mono-layered, pleomorphic flat, polygonal, cuboidal and hobnail cells with abundant clear to eosinophilic cytoplasm, well-defined cell membrane, pleomorphic atypical nuclei with minimal nuclear stratification, prominent irregular nucleoli, few mitotic figures along with hyalinized stroma (Fig3), diagnostic of Clear Cell Adenocarcinoma of Endometrium. Sections from the mass along with endometrium and myometrium revealed > 50% myometrial invasion of the tumour. Sections from the Cervix, Bilateral Tubes and Ovary had unremarkable histology, thus favouring a diagnosis of Primary Clear Cell Adenocarcinoma of Endometrium.

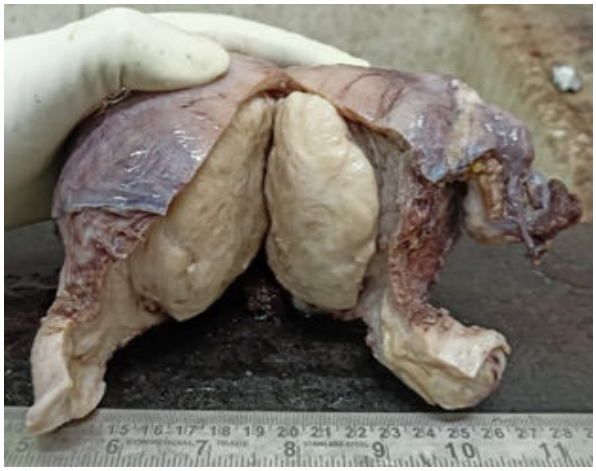

Fig1: Cut open hysterectomy specimen showing tumor on gross examination.

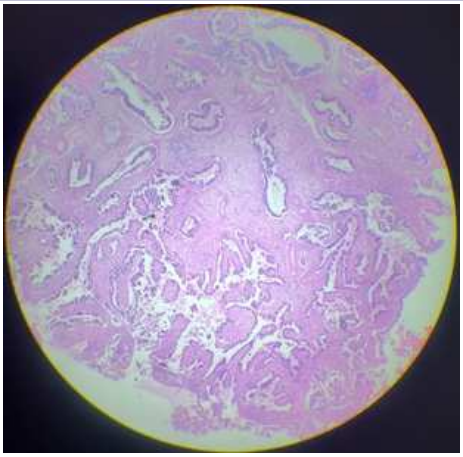

Fig2: HPE section from tumor under 4X magnification

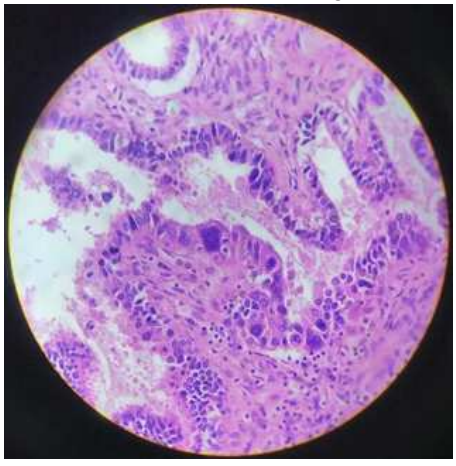

Fig3: HPE section from tumor under 40X magnification

DISCUSSION:

Endometrial Clear Cell Adenocarcinoma is extremely rare in Peri-menopausal females[1][2]. It may mimic a Leiomyoma on Ultrasonography and Gross Examination and rarely exceed 10 cm in size[4].Presence of a mixed papillary and tubulo-cystic architectural pattern, cuboidal, polygonal and Hobnail cells with abundant clear cytoplasm[3], nuclear atypia along with unremarkable histology of cervix, bilateral tubes and ovary confirms the diagnosis of a Primary Endometrial Clear Cell Adenocarcinoma. Absence of intersecting fascicles of monotonous, prominent, spindle-shaped stromal smooth muscle cells with cigar-shaped nuclei, thick-walled blood vessels and the presence of clear cells with distinct cell-borders, nuclear and cellular atypia rules out the diagnosis of Submucous Leiomyoma.

CONCLUSION:

Although very rare, a diagnosis of Primary Endometrial Clear Cell Adenocarcinoma should be kept in mind while evaluating Abnormal Uterine Bleeding in a Peri-Menopausal female, even when Sonography and Gross Findings are not suggestive. Diagnosis is based on the characteristic cellular morphology and architectural pattern on Histo-Pathological Examination.

REFERENCES:

1. Silwal S, Yadav SK, Amalraj B et al. Clear cell Carcinoma of the Endometrium in a patient presenting with Postmenopausal Bleeding. *Case Rep Oncol.2022;* 14(3): 1768-72.
2. Chung SH, Park JW. Uterine Clear Cell Carcinoma of Post-menopausal woman: a Case Report. *J. Menopausal Med. 2016;* 22(2): 122-5.
3. Han G, Soslow RA, Wethington S, Levine DA, Clement PB et al. Endometrial Carcinoma with Clear Cells. *Int J Gynecol Pathol. 2015 Jul;* 34(4): 323-33.
4. Gadducci A, Cosio S, Spirito N et al. Clear Cell Carcinoma of the Endometrium: a biological and clinical enigma. *Anticancer Res 2010;* 30(4): 1327-34.