

## Case Report: Ciliated Endometroid Adenocarcinoma Ovary

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### Case Report

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### Article History

Received: 02.10.2018

Accepted: 26.10.2018

Published: 30.10.2018



**Abstract:** Ciliated epithelial cells are fairly common in gynecologic lesions; however malignant growth showing these elements and occurring in the ovary are very rare. In the case under discussion, the ovarian tumour coexisted with an endocervical growth with different morphology. 90% of ovarian endometroid tumour showed ciliary processes in our patient and these findings are discussed with a comparison to the available literature on this subject.

**Keywords:** Ciliated endometroid tumour in the ovary- Intraepithelial carcinoma in proliferative tumour- Coincidental endocervical growth- Immunohistochemical findings of both tumours.

### INTRODUCTION

Cilia bearing epithelial cells are commonly encountered in benign epithelial tumours of ovary as well a metaplastic component in various pathologic lesions involving female genitalia [1, 2]. Though they are common in serous tumours arising from ovarian surface epithelium, they are not so in others arising from the same or foci of endometriosis. Recorded instances of ciliated endometroid lesions are rare in ovary except focally and the various morphological expressions of this tumour require further studies. In this case, unusually an endocervical growth with different morphological features is a surprise finding; previously unreported and these lesions are discussed against a background of perplexing immunohistochemical studies.

### CASE REPORT

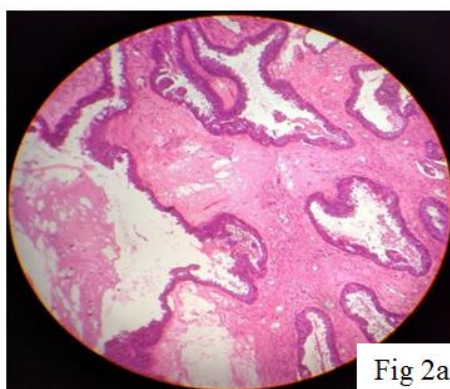
The 55 year old lady came under our care for left lower quadrant pain, abdominal distension and menorrhagia of short duration. Clinical and imaging studies revealed a mass involving left ovary. She attained menopause a few years' back and was on no hormonal replacement. An operation was planned and TAH with BSO was done. Uterus with cervix measured 8x4x3 cm. Endometrium was normal with a thickness of 0.2cm. A greyish white growth measuring 0.9x0.5 and 0.4 cm was noticed arising from endocervix. In the right ovary uniloculated cyst measuring 5x3x2cm was noticed. The left ovary showed a growth measuring 12x8x5cm. It was partly cystic and partly solid and the cysts were filled with thick mucoid material. Solid greyish white areas were prominent without any areas

of necrosis or haemorrhage. Microscopically the uterus showed atrophic endometrium with myohyperplasia due to adenomyosis. The glands did not exhibit any metaplasia; particularly ciliary metaplasia.

The malignant growth involving endocervix had replaced inner two thirds of cervical submucosa. There were two distinct histologic patterns in glandular elements; both equally dominant. Fused glands with cribriform features coexisted with frank adenocarcinomatous differentiation; lacking mucinous differentiation. Cribriform spaces vary in size and in between them, malignant cells of uniform cytology were noticed. These spaces were filled with secretions and inflammatory cells. Metaplastic changes including squamous or ciliary were not seen fig-1.

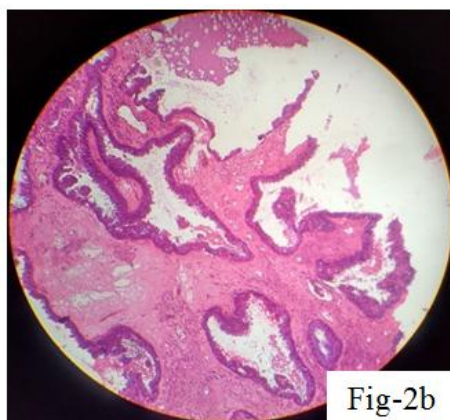


**Fig-1: Endocervical cribriform carcinoma**



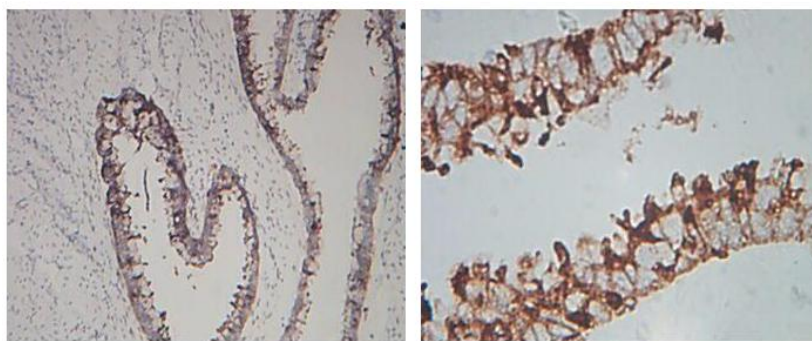
**Fig 2a**

**Fig-2a: Ciliated Borderline Endometriod Tumour**



**Fig-2b**

**Fig-2b: Ciliated Endometriod Borderline Tumour with Intraepithelialcarcinoma**



**Fig-3: IHC-CEA and EMA Positive in Ciliated Borderline Tumour of Ovary**

Left ovarian tumour showed straight glands which were large in size with or without cystic features and were lined by ciliary epithelium; noticed in 90% glands. These processes are well visualized or small and globular like pin head. Luminal margins were fuzzy. 15% glands showed papillary projections, cribriform features, roman bridges and similar changes. Almost all the glands (95%) are lined by malignant cells with classical features of intraepithelial carcinoma. A small focus of microinvasion was noticed, comprising two fused glands; surrounded by desmoplasia fig-2, a, b.

Immunohistochemistry of ovarian tumour revealed positive reaction with CEA, EMA and negative with WT-1, p53, PR, ER, p16 while endocervical growth was negative for all except p16. Finally, a histological diagnosis of endocervical adenocarcinoma of cribriform pattern and ciliated endometrioid borderline tumour of ovary with extensive intraepithelial carcinomatous changes was arrived at fig-3.

## DISCUSSION

The notion that ciliary changes involving malignant epithelial tumours in gynecological practice is unusual, is dispelled by Hendrickson and Kempson [3] in 1983 in a report of 10 cases of endometrial adenocarcinoma arising in uterus; subsequently many papers were published detailing these observations [4]. The rarity of ciliated endometrioid carcinoma arising in ovary is pointed out in a publication by Eichhorn and Scully [5] and only five such cases were reported by them which included two patients with bilateral ovarian masses. Benign tumours arising from serous epithelium in ovary commonly possess ciliary processes; which are histological hallmarks for identification of such tumours and this is not so in malignant ovarian tumours. The case under discussion is unique because only two such cases reported by above authors [5] bear some resemblance to it. Case 1 of the above authors was a 87 years old lady with 10.2 cm solid growth and while second case was seen in a 65 year old woman with a right and left ovarian masses. In all their cases, the percent of tumours bearing cilia ranged from 75% to 100% and in our case, 90% of cells possessed cilia. The ovarian tumours; as described by Eichhorn and Scully exhibited classical features of borderline category where in the glands shows tufting, crowding with cribriform pattern and atypia of lining cells and without any stromal invasion. In our case, only 25% of glands showed some of the above features; however almost all the glands in our case were lined by carcinomatous cells bearing ciliary processes or rounded globules of pinhead size. Cytologically these cells show crowding of nuclei, haphazard placement, overlapping, irregular

nuclear outline, hyperchromic and pleomorphic features. It appears as though our case is only example for a proliferating borderline tumor with intraepithelial carcinoma; an entity recognized by Clement and Young [6]. Histological features as described by Eichhorn and Scully fulfilling the diagnosis of endometrioid carcinoma in ovaries are not encountered in our patient.

The Second interesting feature in our case is the presence of endocervical growth bearing morphological expression, not shared by ovarian neoplasm. The tumour showed typical cribriform carcinomatous pattern; first mistaken as endometrioid, was distinct and different from ovarian ciliated carcinoma. The endocervical tumour is negative for usual endometrioid carcinoma but positive for p16; a marker of endocervical carcinoma. Though mucinous differentiation and the presence of atypical histology of neoplastic cells are helpful features in diagnosing endocervical carcinoma as explained by Clement and Young [6] they were not seen in this case; only immunohistochemistry was the sole means to diagnose this tumour as endocervical adenocarcinoma rather than endometrioid cribriform carcinoma. As expected, there were no cilia bearing carcinomatous cells in this growth.

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