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Histopathological study of Surface Epithelial Ovarian Tumors

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I. Introduction

Ovarian cancer is 6th most common cancer among women and 7th leading cause of cancer deaths worldwide .
About 80% of ovarian tumours are benign.
Mostly in between 20 and 45 years whereas borderline tumours occur at slightly older age.(9)

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Ovary is the most common site of primary malignancy, metastasis may occur.(14)
90% of all ovarian cancers and 2/3rds of all ovarian neoplasms are surface epithelial tumours. (4)

Aim:
Histopathological study of surface epithelial ovarian tumors.

Objectives:
To categorize into benign, borderline and malignant surface epithelial tumours of ovary .
To study their histopathological pattern .
To compare their incidences with other studies.

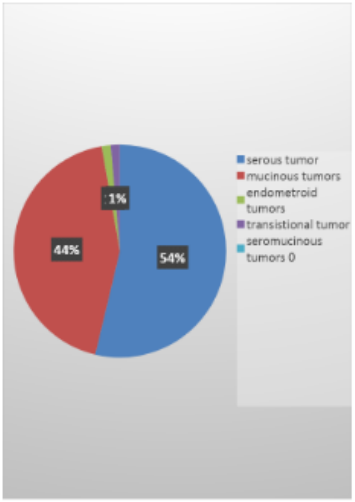
II. Materials & Methods

A 5 year retrospective study was conducted in department of pathology, between July 2014 and June 2019 .
Total 139 specimens of epithelial ovarian tumors were received for histopathological examination were studied.

III. Observation & Results

INCIDENCE OF SURFACE EPITHELIAL TUMORS OF OVARY

Histological types	No.of cases(%)
Serous tumors	54.6%
Mucinous tumors	43.2%
Endometroid tumors	1.4%
Transitional cell tumors	1.4%
seromucinous tumors	00
Total	100%



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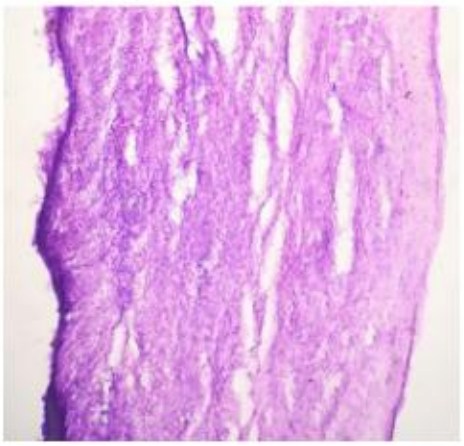
DISTRIBUTION OF CASES ACCORDING TO THEIR HISTOPATHOLOGICAL CATEGORIES

Histological type	Benign	Borderline	Malignant
Serous tumors	62	3	8
Mucinous tumors	53	4	5
Endometriod tumors	0	0	2
Transitional cell tumors	1	0	1
Mixed malignant tumors	0	0	00
Total	116	7	16

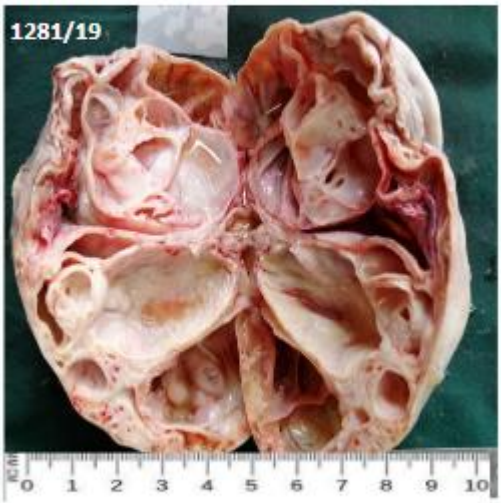
Serous cystadenofibroma

Grossly, Smooth outer surface with thin wall cysts filled with clear watery fluid.

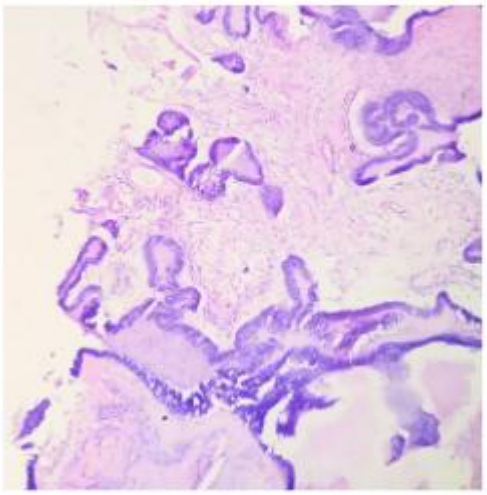


H&E-10X, Cysts lined by flattened cuboidal epithelium with prominent fibrous stroma.

Serous borderline tumor



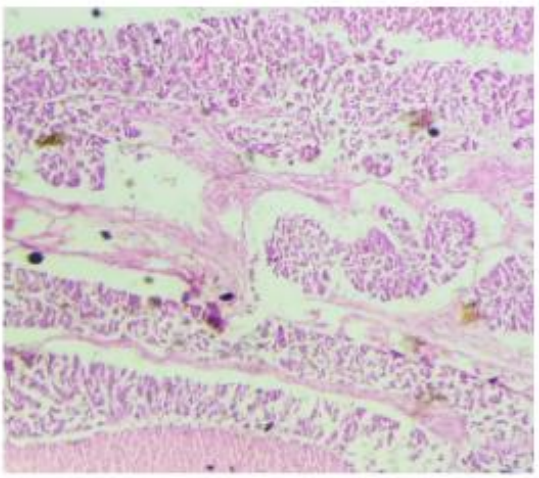
Partially cystic clear watery fluid with few papillary projections .



H&E- 10x, Broad branching papillae detached tufts of stratified epithelium with moderate atypia.

Serous cystadenocarcinoma

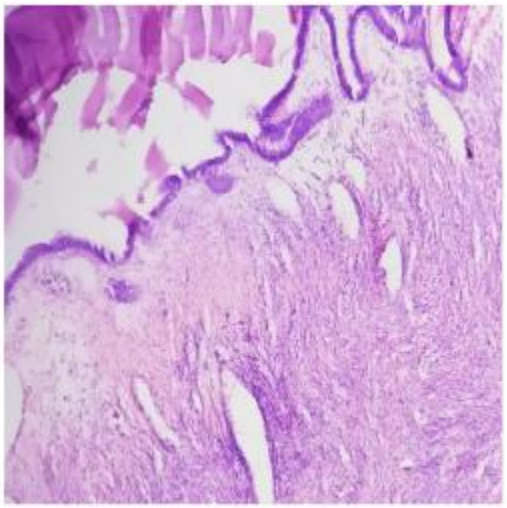
Tan white solid papillary growth & fluid filled cysts.



H&E -40x , Solid masses of cells with high grade nuclear atypia infiltrating into stroma with necrosis.

Mucinous cystadenoma

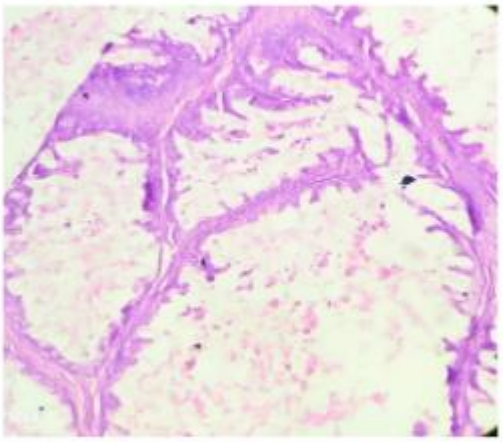
Multilocular cyst containing mucinous material.



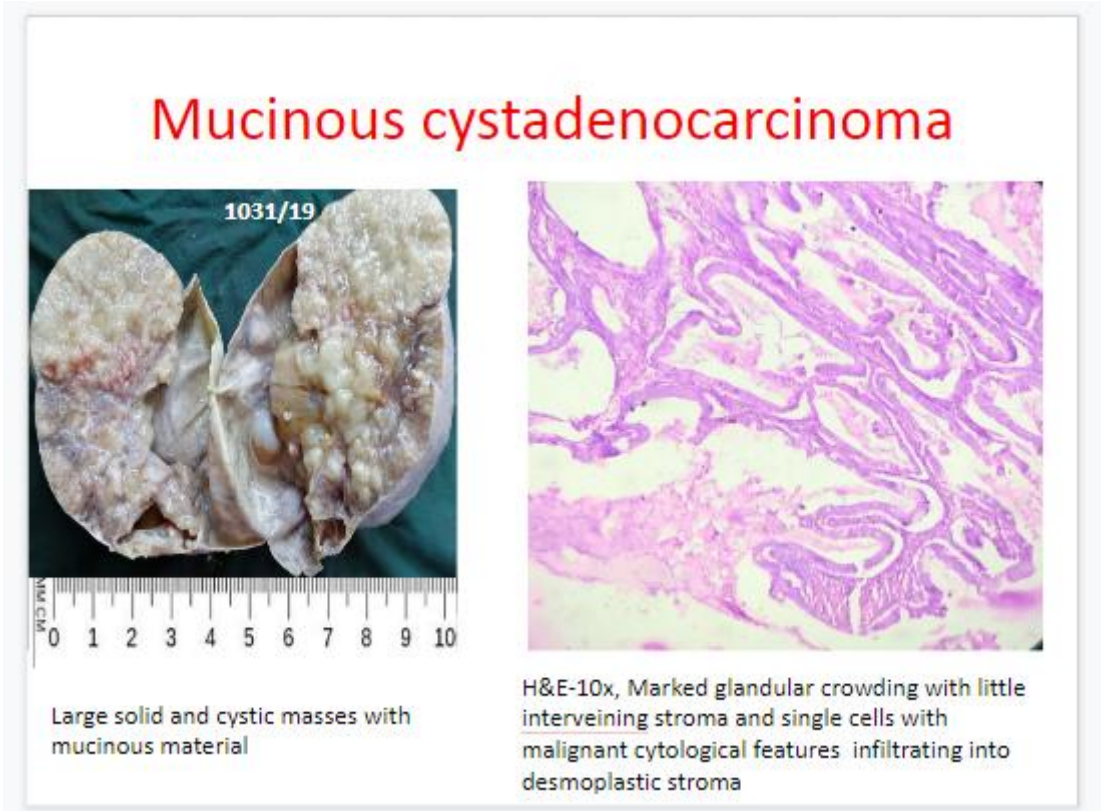
H&E-10X, cyst wall lined by simple nonstratified mucinous epithelium resembling intestinal epithelium.

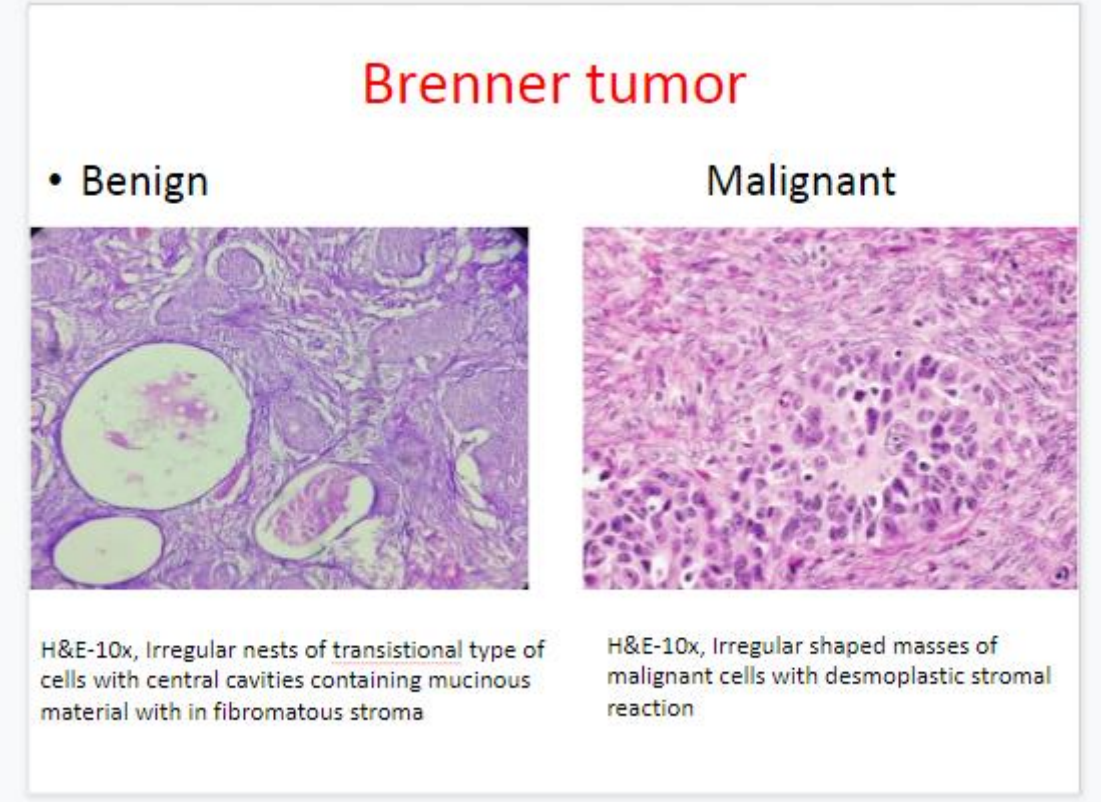
Mucinous borderline tumor

Smooth walls, smaller to larger cysts containing mucinous material



H&E-10x,Cysts lined by gastrointestinal epithelium with goblet cells exhibiting stratification cells





IV. Discussion

Out of 139 cases of epithelial ovarian tumors studied .
Between 23 - 65 years ,
73 Serous tumors,
62- Mucinous tumors,

2 - Endometrioid tumors ,
2- Brenners tumor.

Contd..
Among 139, 116 (84.05%) were benign, 7(5.07%) were borderline and 16 (11.59%) were malignant .
Serous cystadenoma was the most common benign lesion (62,44.9%) followed by mucinous cystadenoma (53, 39.9%), benign brenner tumor(1,0.7%) similar results reported by Nalini et al and Ghartimagar D et al study.(3,4)

Contd…

- Histological distribution of benign epithelial ovarian tumors in comparision to Ghartmagar D et al and Nalini et al studied.[1,4]

S.NO	Type	Ghartmagar D et al(%)	Nalini et al(%)	Present study(%)
1	serous	49.4	39.7	44.9
2	mucinous	17.1	32.6	39.9
3	Brenner	3.5	0	0.7
4	Mixed	3.2	0	0

Contd…
Out of 7 cases of borderline tumors 4(5.5%) were mucinous followed by 3(2.1%)of the serous tumors similar observations were made by nalini et al and Ghartimagar D et al study.(3,6)

Contd…
Out of 16 (11.5%) malignant cases,
8(7.24%) Serous cystadenocarcinoma
5(4.34%) Mucinous cystadenocarcinoma,
2 (1.4%) Endometriod tumor,
1(0.7%) Brenner tumor similar with studies done by nalini et al and jaffrey et al.(3)

Contd..

- Histological type distribution of invasive epithelial ovarian carcinomas in comparison to Jeffrey et al.[4]

Ovarian carcinoma type	Jeffrey et al(%)	present study(%)
serous	6.7	7.2
mucinous	3.4	4.3
endometriod	8.6	1.4
transitional	0.6	0.7
mixed	5.7	0

Contd..

The present study showed 11% of surface epithelial tumors to be malignant ,In Nalini et al., study 17% and in Ghartimagar D et al., 22.6% were malignant.(3,6)

The incidence of malignant tumors were lower than other studies.

V. Conclusion

Among both benign and malignant tumors, serous type was the commonest followed by mucinous type.

Among borderline epithelial tumors mucinous was most common followed by serous tumors.

The present study showed 11% of surface epithelial tumors were malignant.

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