

Case Report

## A Rare Progressive Combination of Two Common Histopathological Entities in Ovary

**Dr. Sujata Sarangi<sup>1</sup>, Dr. Anadi Roy Chowdhury<sup>2</sup>, Dr. Rizia Siddique<sup>3</sup>**

<sup>1</sup>Department Of Pathology, R G Kar Medical College, Kolkata India.

<sup>2</sup>Department Of Pathology, R G Kar Medical College, Kolkata India.

<sup>3</sup>Department Of Pathology, R G Kar Medical College, Kolkata India.

**\*Corresponding author**

Dr. Sujata Sarangi

Email: [jusujata@gmail.com](mailto:jusujata@gmail.com)

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**Abstract:** Primary ovarian carcinoids are very rare entities as compared to metastatic carcinoids which are relatively common. The malignant transformation of mature cystic teratoma into mucinous adenocarcinoma is also an uncommon finding. We present a rare case of a 22 yr old female presenting with an intrabdominal mass along with right sided adnexal mass. The intraabdominal mass was diagnosed as mature cystic teratoma having a mucinous adenocarcinoma transformation. The adnexal mass shows features of ovarian carcinoid along with normal ovarian tissue. We report this case keeping in mind the young age of the patient and the bad prognosis and rarity associated with it.

**Keywords:** Ovary, Intraabdominal mass, Primary carcinoid, , Mucinous adenocarcinoma, Mature cystic teratoma.

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**INTRODUCTION**

Primary ovarian carcinoid is a slow growing rare entity if present in the ovary. The overall survival rate of carcinoid is 44-55% [1]. They have a considerable rate of metastasis. The most common malignant transformation of mature cystic teratoma is squamous cell carcinoma. But here we report a double rarity in which there is a mature cystic teratoma believed to have transformed into a mucinous adenocarcinoma at one site and origin of a primary ovarian carcinoid in one of the adnexa.

**CASE REPORT**

A 22 year old female presented to the Gynaecological outdoor with complaints of amenorrhoea for 3-4 months and loss of appetite. On

examination, two separate lumps were palpable, one in the epigastrium and the other in the right adnexal region. The patient was advised a CA-125 level, Ultrasonography and Contrast Enhanced CT scan (CECT) of the whole abdomen.

CA- 125 came out to be 70.98 U/ml. Other blood parameters were normal.

Ultrasonography revealed SOL in the epigastrium and right adnexal region measuring 108x75x60mm and 110x80x70 mm respectively.

CECT scan of the abdomen revealed an intraperitoneal SOL described as dermoid and pedunculated subserosal fibroid of uterus. (Fig 1, 2, 3).

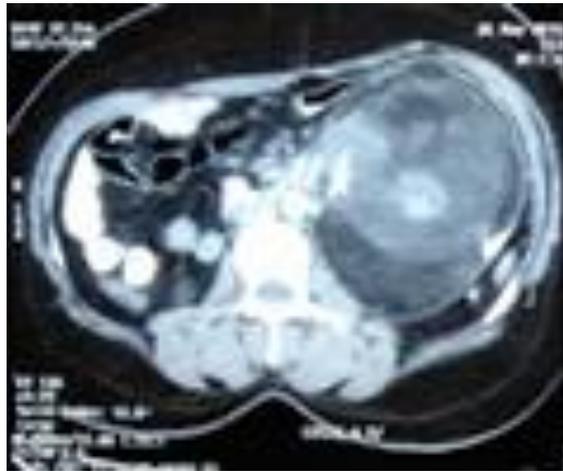


Fig 1- Cross section (CT scan) showing intraperitoneal SOL

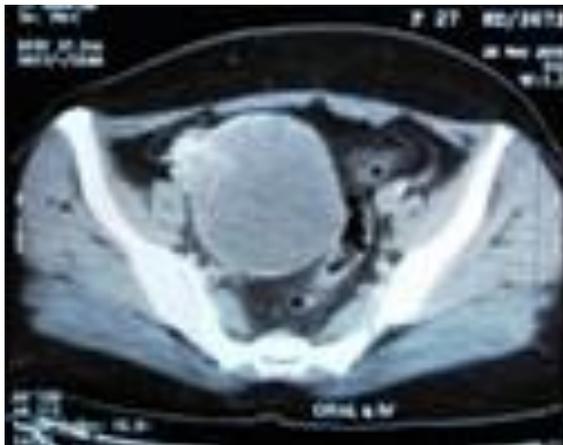


Fig 2- Cross section (CT scan) showing mass described as Pedunculated sub serosal fibroid of uterus

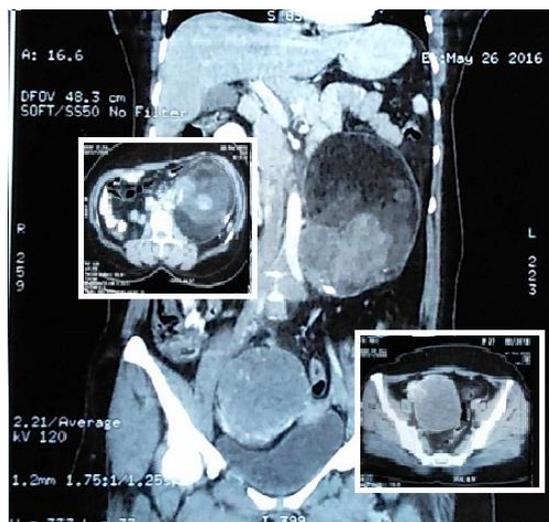


Fig 3- Cross section showing both SOL s.

Exploratory laparotomy was performed and excision of both the masses was done. The mass described as subserosal fibroid was seen to be arising from right adnexa. On gross examination of the mass

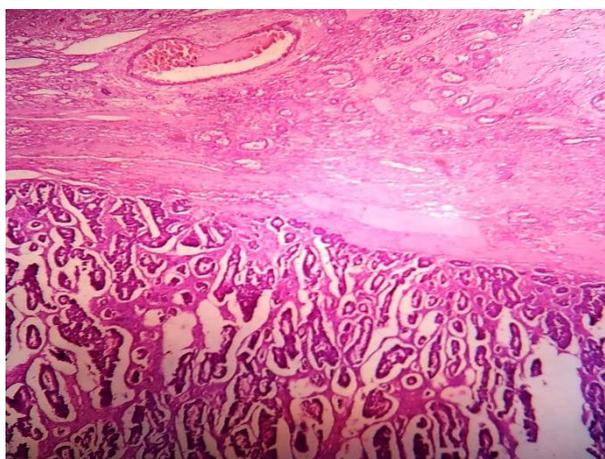
from right adnexa, a single globular grayish brown tissue piece was seen measuring 11x7.5x 6 cms. No capsular breach was noted.(Fig 4)



**Fig 4- Photograph showing cut section of the mass from right adnexa**

Microscopical examination revealed presence of solid tumor comprising of acinar pattern of cuboidal cells having salt pepper chromatin along with brisk mitoses. Adjacent to the tumor tissue normal ovarian

tissue was noted. The sections showed features of moderately differentiated neuroendocrine tumor of the right ovary. (Fig 5).



**Fig 5- Photomicrograph showing histopathological features of Moderately Differentiated neuroendocrine tumour.**

On gross examination of the intraperitoneal mass, a single globular mass measuring 11x8x7 cms was noted. Cut section of the mass showed solid and

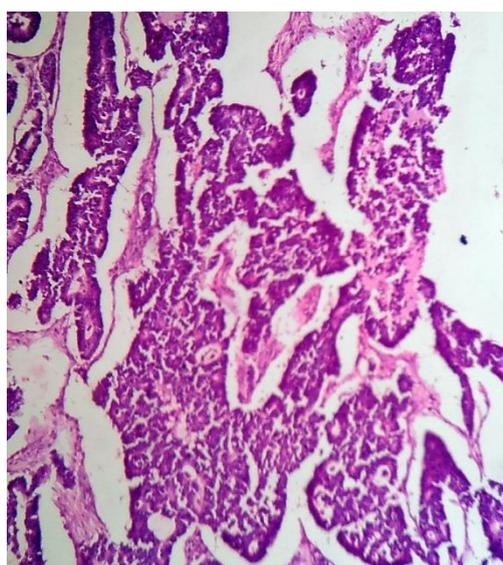
cystic areas. The solid areas show bone and cartilage and the cystic areas contain thick mucinous material along with keratinous content, hair and teeth (Fig 6).



**Fig-6: On gross examination of the intraperitoneal mass, a single globular mass measuring 11x8x7 cms was noted.**

Microscopical examination revealed features of mature cystic teratoma along with areas of extracellular mucin lakes and pleomorphic and atypical columnar cells arranged in villo-glandular

fashion. The features are consistent with malignant transformation of mature cystic teratoma to mucinous adenocarcinoma.(Fig 7).



**Fig 7: Microscopical examination revealed features of mature cystic teratoma**

## DISCUSSION

Mature cystic teratoma is one the most common tumours of the reproductive age group. It comprises of 20% of all ovarian neoplasms [2]. The teratomas have the propensity to transform into squamous cell carcinoma. The transformation into mucinous cystadenocarcinoma is 3-6% [3].

The mucinous cystadenoma presents as typically large unilateral multicystic mass containing mucinous secretions. It is an extremely rare entity and

the prognosis of stage I is good but the prognosis of stage III is very poor. Cytoreductive surgery is useful and adjuvant chemotherapy has been tried in some cases but it's relevance has not been established yet [4].

Primary ovarian carcinoids account 5% of all carcinoids and they make up 0.1% of all ovarian tumours [5]. The tumour is usually asymptomatic but may also present as carcinoid syndrome with the classic symptoms of flushing of upper extremities and face, wheezing and diarrhea.

The carcinoid of ovarian origin is usually unilateral. There are four morphological variants-insular, trabecular, strumal and mucinous. The most common pattern is insular type and it can be detected at an early stage. The mean age of presentation is 40-70 years [6]. Around 40% of insular carcinoid cases presents with carcinoid syndrome. Most of the carcinoid behaves in a benign fashion. However, it is essential to distinguish carcinoid from metastatic deposits of carcinoid from gastrointestinal tract. The primary carcinoids may metastasize to the peritoneum but the overall prognosis is better than the metastatic deposits of carcinoid in the ovary.

The treatment of choice is surgical resection. It has been suggested that if the diagnosis is suspected then pre and intra-operatively octreotide should be administered to prevent complications. In our case the patient underwent resection for both the tumours and is now under close follow up.

#### CONCLUSION

The simultaneous presence of mucinous adenocarcinoma and pure ovarian neuroendocrine carcinoid in a patient in her 3<sup>rd</sup> decade is quite a rare finding and carries an unfavourable prognosis. Hence we report this case to increase awareness about this double trouble so that the clinicians and the pathologist can work towards a better outcome for the patient.

#### Declaration of conflicting interests

The authors declared no conflicts of interest with respect to the authorship and/or publication of this article.

#### REFERENCE

1. Modlin IM and Sandor A: An analysis of 8305 cases of carcinoid tumors. *Cancer*, 1997; 79: 813-829.
2. Sharma R, Biswas B, Wahal SP, Sharma N, Kaushal V. Primary ovarian carcinoid in mature cystic teratoma: A rare entity. *Clin Cancer Investig J*. 2014; 3:80-82.
3. Vang R, Gown AM, Zhao C, Barry TS, Isacson C, Richardson MS, Ronnett BM. Ovarian mucinous tumors associated with mature cystic teratomas: morphologic and immunohistochemical analysis identifies a subset of potential teratomatous origin that shares features of lower gastrointestinal tract mucinous tumors more commonly encountered as secondary tumors in the ovary. *The American*

*journal of surgical pathology*. 2007 Jun 1; 31(6):854-69.

4. Hackethal A, Brueggmann D, Bohlmann MK, Franke FE, Tinneberg HR, Munstedt K: Squamous-cell carcinoma in mature cystic teratoma of the ovary: systematic review and analysis of published data. *Lancet Oncol*. 2008; 9:1173–1180.
5. De la Torre J, García A, Castellví J, López M, Gil A. Primary ovarian trabecular carcinoid tumour: a case report with an immunohistochemical study and a review of the literature. *Arch Gynecol Obstet*, 2004; 270: 274-277.
6. Ginger J. Gardner, Diane Reidy-Lagunes, Paola A. Gehrig. Neuroendocrine tumors of the gynecologic tract: A Society of Gynecologic Oncology (SGO) clinical document. *Gynecologic Oncology*, 2011; 122:190–198.