



“A RARE CASE OF AN OVARIAN MUCINOUS CYSTADENOMA COEXISTING WITH MATURE CYSTIC TERATOMA”

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ABSTRACT

Collision tumor refers to at least two tumors occurring side by side but histologically separate and without mixing in the same tissue or organ. Although collision tumor, involving other organs have been reported, occurrence in the ovary is rare.

This is a case of a 25 year old, nulligravid, who presented with a gradual abdominal enlargement. Work-up showed an ovarian mass growth. Fine-needle aspiration of the cystic portion yielded probable mucinous cystadenoma in the right ovary and corpus luteum cysts in the left ovary.

Awareness of the coexistence of such tumors is important for proper management and careful inspection during histopathologic examination.

INTRODUCTION

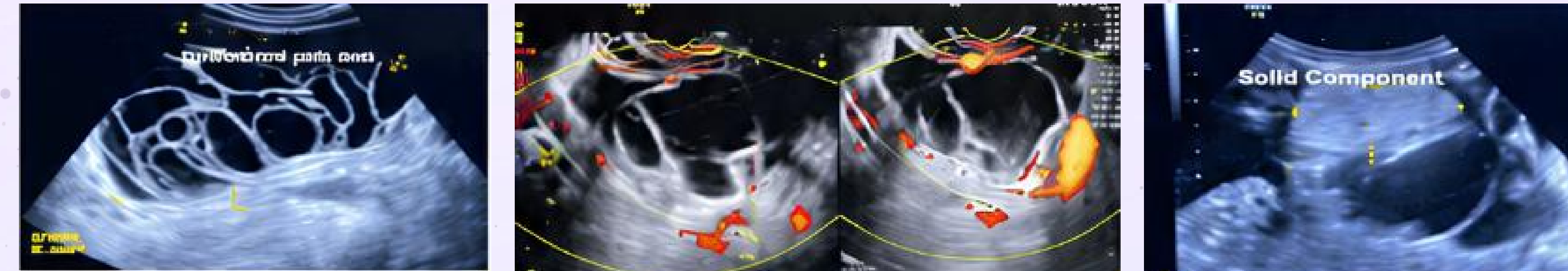
A collision tumor is defined as a rare coexistence of two different tumors within the same organ without histologic mixing. There have been cases of serous adenocarcinoma, granulosa cell tumors, or mucinous and cystadenocarcinoma, and stromal cell tumors in addition to the more common teratomas involving the ovary. Collision tumors are diagnosed histologically. They report aims to illustrate more of the ovary specifically, the clinical characteristics, etopathogenesis, diagnosis, and management of an ovarian mucinous cystadenoma coexisting with a mature cystic teratoma.

CASE REPORT

This is a case of a 25-year-old, nulligravid who presented with progressive abdominal discomfort and bloatedness for two years. She had been in her usual state of health prior to onset of illness.

Past medical, Family history, personal and social history as well as menstrual history were all noncontributory. 2 years prior to consultation she experienced right lower quadrant pain, sought consultation, claimed to be managed as PCOS only, and was prescribed probiotics capsules. However, she lost follow-up.

During the interim, she experienced abdominal enlargement, bloatedness, and weight gain of 4kgs in three months without any bowel movements, urinary symptoms, or menstrual cycle changes, and a negative pregnancy test. She consulted another private OB GYN and the following diagnostics were done and revealed Transvaginal ultrasound (Day 20 of cycle) Right ovarian tumour measuring 27x19x13cm, a multilocular solid mass, largest solid component measures 6.5x2.4x1.9cm with minimal color flow with high risk for malignancy (68.2%) by adnex model. Highest relative risk for borderline tumor of 5.5 and an elevated serum CA-125 63 U/mL. Operation was advised, but she was referred to our institution for consult due to financial constraints.

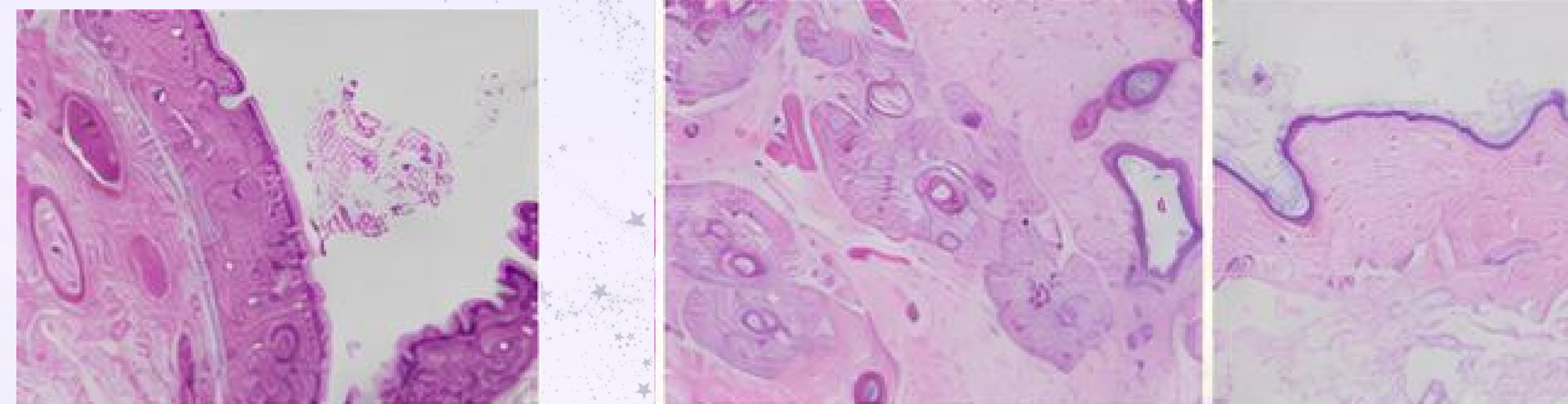


Transvaginal Ultrasound: Ovarian New Growth, Right



Right ovary was converted to a multicystic ovarian mass measuring 22x21x21 cm mass with 2 cm point of rupture

Frozen Section of Ovarian Mass, Right



Mucinous Cystadenoma: Multiple cyst lined by a single layer of bland mucinous epithelium.

Cyst containing a mixture of mature benign tissues including keratinized squamous epithelium, hair follicles and sebaceous glands.

All images were taken with consent from the patient and parents with strict adherence to data privacy law. For scientific purposes

On physical examination, the abdomen was soft, non-tender with a palpable pelvoabdominal mass measuring 24 x 28 x 21 cm cystic, slightly movable, non-tender and extending from the symphysis pubis to 5cm above the umbilicus. There were no signs of ascites nor lymphadenopathies.

On pelvic examination, the external genitalia were grossly normal. Speculum exam was unremarkable. On internal examination, cervix was closed, firm, posterior in position, mobile and no cervical motion tenderness. Uterus was not appreciated due to huge cystic, slightly movable, non tender pelvoabdominal mass measure 24 x 28 x 21 cm extending from the symphysis pubis to 5 cm above the umbilicus. On recta-vaginal exam, noted intact anal sphincter with good sphincteric tone, smooth and pliable parametrium, no nodularities. Lower pole of the mass was not appreciated.

Patient underwent exploratory laparotomy with right salpingo-oophorectomy and left oophorectomy with frozen section under combined spinal and epidural anesthesia. Frozen section showed mature cystic teratoma and mucinous cystadenoma, right ovary and corpus luteum cyst, left ovary.

Follow up at this patient, post operativey was uneventful. Final histopathologist Diagnosis showed: Mucinous cystadenoma with focal typical proliferation and focus on mature cystic teratoma, right ovary; Chronic salpingitis, right fallopian tube; Corpus luteum cyst, left ovarian cyst.

DISCUSSION

- A collision tumor is a rare entity of coexistence of two different tumors within the same organ without histologic mixing.
- Premenopausal and postmenopausal women (median age 50, range 18 to 83 years) are at risk.
- Collision tumors can be: Both Benign tumors = 54.3% and Benign Malignant/Borderline = 45.7% of cases.
- Most common collision combinations in the Ovaries Teratoma + Cystadenoma
- Pathogenesis of collision tumor is unknown, being the simplest theory the accidental development of two different tumors. Other hypotheses include: 1. Common origin from pluripotent stem cell 2. Simultaneous proliferation of two different cell lines 3. Common carcinogenic agent interacting with different tissues and inducing different tumors, and 4. Tumor growth promotion by microenvironmental changes induced by primary lesion such as oncogenic growth factor productions, neoangiogenesis and inflammation.
- Majority of ovarian collision tumors may exhibit the same signs and symptoms as ovarian new growth, including pelvic pain, abdominal pain, palpable mass, abdominal swelling, and abnormal uterine bleeding.
- Most ovarian collision tumors are not recognized by ultrasound or MRI.
- It is mostly diagnosed postoperatively by histopathological examination.
- Post-operatively, no signs of ovarian collision tumor recurrence or metastasis were observed and showed successful postoperative course free of complications.

CONCLUSION

The coexistence of ovarian collision tumors with other benign ovarian tumors is rare, common, despite their extreme rarity. Furthermore, teratoma combinations with one or more other type of ovarian collision tumors is extremely rare histologically and previously not closely studied. In conclusion, the rules of frozen section to confirm radiological clues can help prevent needless, invasive surgery.