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A Rare Collision Tumor of Ovary

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Abstract:

Collision tumors represent a coexistence of two adjacent tumors but histologically distinct tumors without admixture in the same tissue or organ. Collision tumors in ovary are a rare entity and combination of mucinous cystadenoma and adult granulosa cell tumor is very rare. Here we present a case in 47 year old women who presented out patient department of obstetrics and gynecology with complaints of lower abdomen pain and dysfunctional uterine bleeding. Patient underwent hysterectomy with salphingo oophorectomy and microscopically it was diagnosed as Adult granulosa cell tumor with mucinous cystadenoma.

Keywords: Adult granulosa cell tumor, mucinous cystadenoma, ovary, collision tumors.

INTRODUCTION

Collision tumors represent a coexistence of two adjacent but Histologically distinct tumors without admixture in the same tissue or organ. Though such tumors have been reported often in various organs, their occurrence in ovary is rare. Here we report a case of collision tumor of ovary comprising mucinous cystadenoma and adult granulosa cell tumor. Adult granulosa cell tumor (GCT) accounts for 1-2% of all ovarian neoplasm and they are known for late recurrences, even after 10-20 years in some cases.[1] Mucinous neoplasms occur rarely in association with granulosa cell tumor, cystic teratoma, Sertoli-leydig cell tumor and carcinoid tumor [2] So here we report a rare and unique case of mucinous cystadenoma with association with adult granulosa cell tumor.

CASE REPORT:

A 47 year old woman was presented out patient department of obstetrics and gynecology with complaints of lower abdomen pain and dysfunctional uterine bleeding. Ultra sonography findings showed a mass in the left ovary measuring 8x6 cms. Patient underwent hysterectomy with bilateral salphingo oophorectomy and the specimen was send for histopathological examination.

Gross findings: The hysterectomy specimen showed enlarged left ovary measuring 7x6x5 cms.

The cut section of the ovary showed both cystic and solid areas.

Microscopic findings : microscopically it revealed a combination of morphological features. The multiple sections studied showed solid and cystic component. The solid component was extremely cellular and composed of sheets of closely packed, monotonous looking round to oval cells lobulated by fibrous Septa. Cells showed eosinophilic cytoplasm and relatively uniform pale nuclei, many of which had prominent grooves. Call-Exner bodies were present at places as Adult granulosa cell tumor [figure 1] and cystic component showed that it was lined by a single row of uniform mucin-filled tall columnar cells with basal nuclei, resembling endocervical epithelium which were consistent with mucinous cystadenoma. [figure 2]

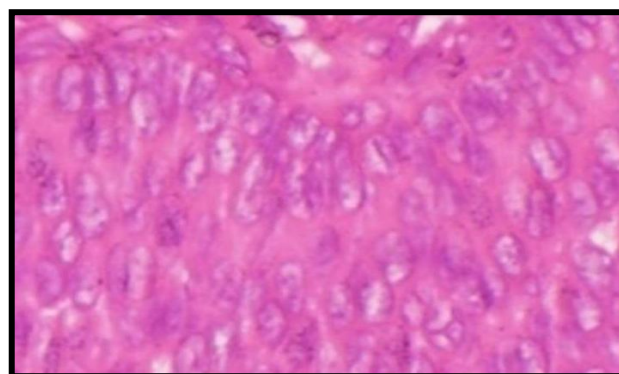


Figure 1: round to oval cells with eosinophilic cytoplasm and prominent nuclear grooves. (H&E X400)

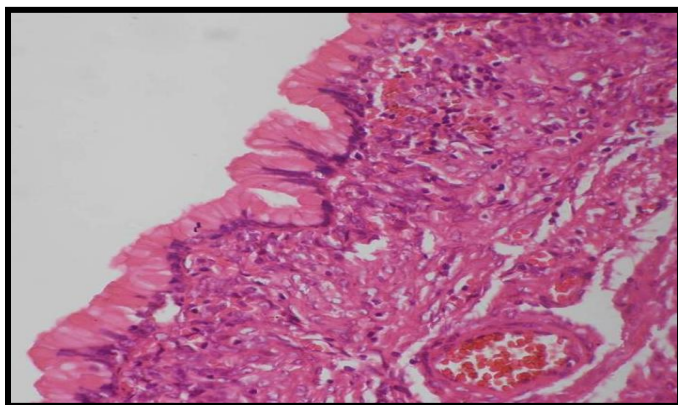


Figure 2: cystic component lined by a single row of uniform mucin-filled tall columnar cells with basal nuclei (H&E X 100)

DISCUSSION:

Collision tumors represent a coexistence of two adjacent tumors but Histologically distinct tumors without admixture in the same tissue or organ. Collision tumors in ovary are a rare entity and combination of mucinous cystadenoma and adult granulosa cell tumor is very rare. Granulosa cell tumor (GCT) and mucinous cystadenoma are independent tumor arising from sex cord stromal cells and surface epithelium of ovary, respectively. Though collision tumors have been reported earlier, like serous cystadenoma and mature cystic teratoma, [3] but combined mucinous cystadenoma and GCT was rarely reported.

Occasionally GCT presents as a small lesion in cystic teratoma which could easily be missed through inadequate sections, so ovaries with mature cystic teratoma should be examined thoroughly for small foci of GCT. [4] similarly in the present case grossly it was cystic and there was small solid foci, which microscopically

showed features of GCT and cystic component showed features of mucinous cystadenoma.

At a molecular level, various cytogenetic abnormalities have been discovered in adult GCT. Trisomy 12 and 14, monosomy 22 are among the more prevalent ones. Aneuploidy has been correlated with a poorer survival. In addition, germ line P53 mutations have also been reported in these tumors. The prognostic significance of this mutation is, however, not known. Further research is needed before a definite conclusion is drawn regarding the clinical significance of these cytogenetic markers. [5,6]

In conclusion , we would like to emphasize upon the fact that multiloculated cysts have to be extensively examined grossly, so as not to miss any solid component which might have a bearing on prognosis of the patient. However; in the present case the small solid foci showed the features of GCT. GCT tumors are characterized by a very indolent course, and late recurrences. This association of GCT and mucinous cystadenoma warrants close follow up of patient as recurrences can occur many years after removal of primary tumor.

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