Case Report

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Endometrial Carcinoma Associated with Bilateral Ovarian Adult Granulosa Cell Tumor: Synchronous Malignancy

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Abstract

The adult granulosa cell tumor clinically presents with symptoms of metrorrhagia or amenorrhea due to high serum estrogen levels and these patients may have endometrial hyperplasia in one third of cases and endometrial cancer in 10% of cases. We present a 70-year-old female, post-menopausal having history of pain and mass per abdomen of one and half month duration. On ultrasonography it was right ovarian mass and fibroid uterus. She underwent abdominal hysterectomy, and on histopathology it was found to be endometrial carcinoma grade-II with adult granulosa cell tumor both ovaries. We report this case for its unusual clinical presentation, radiological and histopathological findings.

Keywords: Endometrial Neoplasm; Ovarian Cancer; Granulosa Cell Tumor.

Case Report

A 70 year old post-menopausal female presented with history of pain and mass per abdomen of one and half month duration. She had history of occasional PV bleeding since two month. She was married at the age of 20 years having obstetric history of P5L5A0 (2 males and 3 females), menopause 25 years back. She is known diabetic for 25 years and on treatment. She had no history of hormonal or contraceptive use. Other family history and history of systemic disease was non contributory. Ultrasonography, showed mass lesion in fundic region measuring 5x4x3.5 cms, lobulated and hyperechoic. Right ovary showed nodular hyperechoic lesion 2 cm in diameter. The liver, gall-bladder, spleen, kidney and urinary bladder were normal. Ultrasonography was suggestive of fibroid uterus. Computed tomography revealed enlarged, bulky uterus with fundic area showing intramural mass with thickened endometrium and calcification specules. It was suggestive of fibroid associated with degenerative changes with ovarian neoplasm.

Abdominal hysterectomy with bilateral salpingo-ophorectomy was done. On gross examination uterus was bulky and measured 8x7.5x3cm. The fundic area showed irregular bosselations. On cut open the endometrial canal showed a grey white to tan coloured fleshy, firm, irregular growth measuring 4.2x3.5x1.5cm at fundic area extending up to lower uterine segment (fig.1). Right ovary measures 3x2x1.7cm. Cut section showed solid, grey white to yellowish nodule measuring 2 cm in diameter with focal area of cystic change. Left ovary measures 1.5x1.5x1cm. Cut section showed small grey white nodule measuring 1cm. Cervix and both fallopian tubes were unremarkable. Section from endometrium showed a tumor composed cells arranged in glandular pattern predominantly (fig.2, fig 3) with solid areas without any squamous differentiation. On histopathology diagnosed as endometrial carcinoma grade-II. On microscopic examination both ovaries showed granulosa cell

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tumor limited to ovary. The tumor cells were arranged small nests, cords, follicles, trabeculae (fig 4). In areas increased mitotic activity noted.

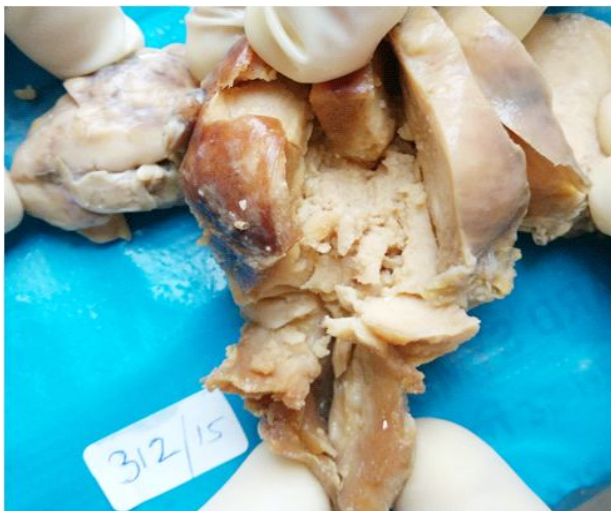

Fig. 1: Gross pan-hysterectomy specimen showing endometrial growth with bilateral ovarian tumours

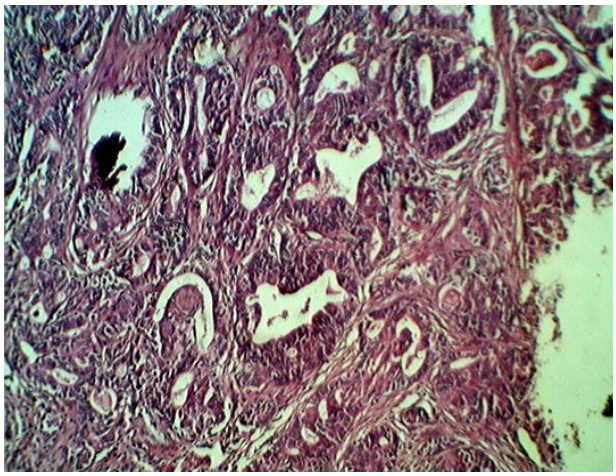

Fig. 2: Photomicrograph showing endometrial carcinoma grade-II (H and E stain, x100)

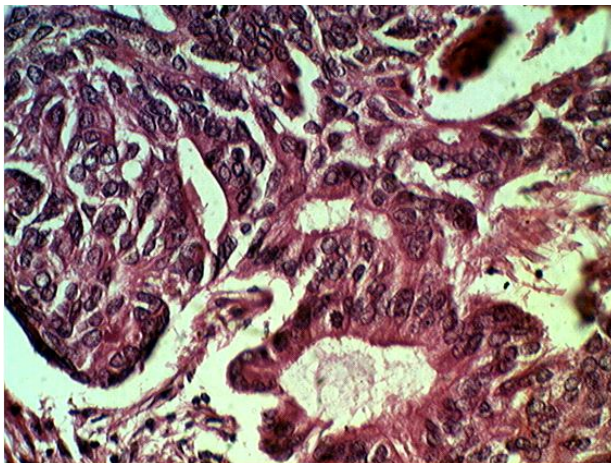

Fig. 3: Photomicrograph showing endometrial carcinoma grade-II high power view (H and E stain, x400)

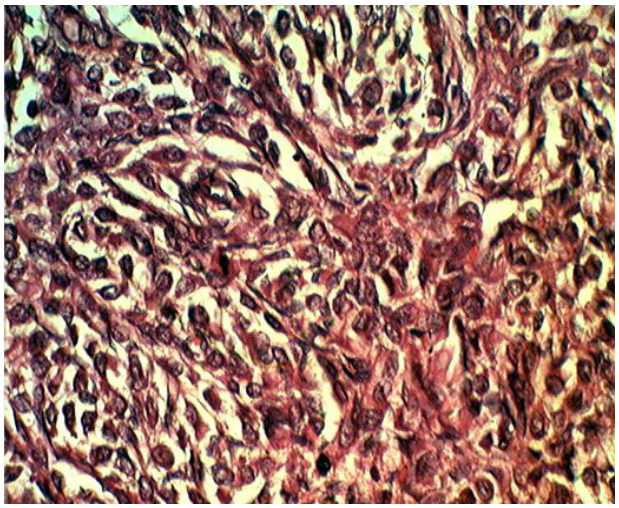

Fig. 4: Photomicrograph of ovary showing granulosa cell tumor high power view (H and E stain, x400)

Discussion

Endometrial carcinoma associated with granulosa cell tumor of the ovary is seen in <5% of cases [1,2]. Adult granulosa cell tumors account for approximately 1-2% of all ovarian tumors[1]. More often they occur in post-menopausal women than premenopausal [2]. Clinically they present with various symptoms like abdominal pain (30-50%), abdominal distension (41%), mass per abdomen, bleeding or ammenorrhea [3].

Most granulosa cell tumors secrete estrogen which may be responsible for precocious puberty in young girl, or in older patients may produce endometrial hyperplasia (4-10%), endometrial carcinoma (5-35%) [3,4] and cystic disease of the breast. Majority of patients are post-menopausal and clinically present with abnormal vaginal bleeding.

On histopathology granulosa cell tumors are arranged in variety of patterns including micro / macro follicular, trabecular, bands and diffuse sheets. In our case all patterns were noted with areas having poor differentiation. Call-Exner bodies were found in few areas.

Also in our case there was associated endometrial adenocarcinoma- grade II with solid component 15%, with moderately pleomorphic hyperchromatic nuclei and one to two nucleoli was noted. On histopathology endometrial carcinoma were graded into I, II and III, based on the amount of solid and squamous areas in a tumor [6]. Our case showed grade-II features with diffuse endometrial involvement and involving full thickness myometrium with surface nodular mass, extending upto lower uterine surface and seeding in pouch of Douglas, thus making it clinically stage III a

as per revised FIGO [7] staging for carcinoma of the endometrium. There was no evidence of metastasis on radiological evaluation.

Endometriod adenocarcinoma and its variants present early because of predominant symptoms of post menopausal bleeding. The 80% of patients present with clinical stage I disease. The 5 year survival rates are 96%, 67% and 23% for stage I, II and III disease respectively. The standard treatment is surgical resection viz hysterectomy with bilateral salpingo-oophorectomy with or without adjuvant radiotherapy.

Granulosa cell tumors are mainly treated as complete surgery (hysterectomy with bilateral salpingo-oophorectomy). The overall survival is good, approximately 90% at 5 years [8]. The recurrence is rare and often delayed.

Our patient underwent total hysterectomy with bilateral salpingo-oophrectomy and she was on regular follow up.

Conclusion

Adult granulosa cell tumor of the ovary associated with endometrial carcinoma is rare. Whenever a diagnosis of granulosa cell tumor of ovary is made, careful histopathological evaluation of endometrium should be done to rule out endometrial hyperplasia or carcinoma.

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