STUDY OF FUNCTIONING OVARIAN TUMORS

(Reports of 3 Cases)

by

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Introduction

This study is a presentation of 3 interesting cases of Functioning Ovarian Tumors. Out of these 3 cases, 2 are of arrhenoblastoma and 1 granulosa cell tumor. During the period from August, 1973 to July, 1975 total number of cases of ovarian tumors treated at Obstetrics and Gynaecology Department, S.S.G. Hospital, Baroda was 57 giving the incidence of functioning ovarian tumors to 5.27%. Reported incidence is 5-6% of ovarian tumors.

CASE REPORTS

Case 1

A 38 years old married woman was admitted on 6-9-1975 with the history of amenorrhoea of 3 years, abnormal hair growth over face, chest and abdomen since 2 years, hoarseness of voice and loss of libido followed by increased libido since 2 months, lump in abdomen 1 month.

She attained menarche at the age of 12 years and was having regular periods till 3 years ago. She had 3 full term normal deliveries.

On general examination she was fairly built well nourished. was having excessive hair growth of masculine distribution over face, abdomen and chest (Fig. 1) and having atrophic breasts. Systemic examination was normal.

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On abdominal palpation a freely mobile, non-tender, firm lump of 10″ x 8″ with irregular surface was palpated. On vaginal examination uterus was of normal size, anteverted, anteflexed. A mass in right fornix which was in continuation with abdominal swelling was felt. Clinical diagnosis was unilateral virilizing ovarian tumor. Routine investigations were within normal limits. Urinary 17—Ketosteroids 6.1 mg/24 hours. X-Ray skull was normal. I.V.P. showed mild distension of calyces of Rt. kidney.

Laparotomy was done on 14-9-1974. A multiloculated right sided ovarian cyst was present. The other ovary was having a small cyst hence panhysterectomy was done. Postoperative period was uneventful.

Macroscopically tumour was 10″ x 6″. size weight 3.5 lbs. yellowish white lobulated with shining surface. Cut surface showed variegated appearence with multiple loculii and areas of haemorrhage (Fig. 2).

Histopathologically tumor showed spindle shaped cells with differentiation towards tubular formation. One of the sections showed Sertoli and Leydig cell proliferation and was diagnosed as Differentiated. Arrhenoblastoma of ovary (Fig. 3). After operation hair growth regressed within 4 months. Now there is no hirsutism.

Case 2

A 32 years old woman was admitted with amenorrhea of 4 years, lump in abdomen 3 years, hoarseness of voice 2 years.

The patient had 5 full term normal deliveries. Her menstrual history was regular till 4 years ago.

On general examination patient was well built and nourished with excessive hair over chest, face, atrophic breasts and hypertrophic clitoris

(Figs. 4, 5). Systemic examination did not show any abnormality.

On abdomen there was midline, pyriform, firm. nodular, non-tender lump with restricted mobility. On vaginal examination uterus was anteverted normal in size with fullness in left fornix.

Routine investigations were normal. Urinary 17 Ketosteroids 15.6 mgm%.

On laparotomy there was right sided ovarian tumor which was free. Panhysterectomy was done.

Macroscopically tumor was pale-pink, polycystic, lobulated, kidney shaped of 8" x 4" size, of 15 lbs. weight. Cut surface showed multiple cysts of varying size.

Microscopic examination revealed masses of round cells and spindle cells but there was no tubular arrangement and was diagnosed as undifferentiated arrhenoblastoma of ovary.

Case 3

A 24 years old woman was admitted as an emergency case in labour room on 18-1-1975 with the complaint of amenorrhea 3 years, pain in abdomen and distension since 1 day. Menstrual history was normal. She was having 3 full term normal deliveries, last delivery 4 years back.

On examination patient was pale anaemic, pulse 136/per minute. On abdominal palpation there was guarding and tenderness in the lower abdomen, fluid thrill was present.

On bimanual vaginal examination uterus was retroverted, movemets slightly tender but size of uterus could not be made out. There was vague fullness and tenderness in all the fornices. Clinical diagnosis of ruptured ectopic pregnancy was made.

On urgent laparotomy abdominal cavity was full of blood. On left side tumor of 6" x 6" size was present, with greyish smooth surface and there was rent of about 1" on lower aspect of cyst. The other ovary was normal. Left sided ovarian cystectomy was performed. Postoperative period was uneventful. She regained her normal menstruation after 3 months. Now she is pregnant and progressing well.

Histopathology Report: cut surface of the cyst showed granular greyish vesicles filling up the cyst. Microscopy showed microfollicular pattern and diagnosis as granulosa cell tumour was made. (Fig. 6, 7).

Comments

Arrhenoblastoma is characteristically a tumor of young women with maximum incidence in the third decade. The youngest patient recorded is a 4 year old child. It is a rare tumor. Up to 1965 321 cases are reported. (Novak and Long, from Ovarian Tumor Registry). From India so far 7 cases have been reported. Clinically patients have defeminizing symptoms including amenorrhae in 70%, breast atrophy, hirsutism, being the most common virilizing symptom in about 79%, deepening of voice and enlargement of clitoris in 50%. In 96% of cases tumour was unilateral. Urinary 17-Ketosteroid level seems to be unrelated to the degree of virilism, type of tumor and presence of interstitial cells. Only third of patients with virilism showed increased urinary 17-Ketosteroid excretion. After excision of tumor defeminization regressed and usually normal menstruation followed by reappearence of normal female habitus. Treatment is surgical extirpation with total hysterectomy and bilateral salpingo-oophorectomy when child bearing function is not essential.

Whereas granulosa cell tumors of ovary are the most common of so called functioning ovarian tumors, about 3.6% of solid ovarian tumors and about 80% of gonadal stromal tumors are of this variety. This tumor has no age bar, being found in stillborn infants to elderly menopausal women. In one study 37% occurrence was found in women during reproductive years and only 2% occurred prior to puberty. In other study about one third were postmenopausal. Clinical picture varies according to the age at which it develops and of course the capability and hormone production by component cells. The most frequent initial manifestation are abnormal vaginal bleeding, pelvic pain, adenexal mass, abdominal enlarge-

ment and ascitis. Diagnosis is also difficult because of variability of microscopic pattern. Recurrance rate has been cited as 28% Endometrial carcinoma coexists in 15.2% of cases.

Summary

Case study of 3 functioning ovarian tumors out of which 2 were arrhenoblastomas and one was granulosa cell tumor. is presented. The interesting features about the first 2 cases were that patients were premenopausal age having ovarian mesenchymal tumor histologically "Arrhenoblastoma" presented with moderate hirsutism and defeminizing symptoms. Abdominal panhysterectomy was done in both and virilisation disappeared.

The interesting features about the third case was that she was admitted as an obstetric emergency and was clinically diagnosed as ruptured ectopic pregnancy. On laparotomy tumor was found and histopathologically diagnosed as granulosa cell tumor. After cystectomy patient regained normal menstrual cycles and became pregnant.

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References

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See Figs. on Art Paper X-XI