A CASE OF ENDODERMAL SINUS TUMOUR OF OVARY

by

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Among ovarian tumours, the endodermal sinus tumour was distinguished and described by Teilum, as a highly malignant extraembryonal germ cell tumour showing a selective overgrowth of yolk sac endoderm and extra-embryonic mesoblasts. It was confused in the past with the mesonephroma of the ovary. Like other germ cell tumours, it is relatively uncommon and is a disease of the young women.

CASE REPORT

Mrs. S., aged 19 years, Gravida I, Para I, was admitted on 7-6-'77 with a history of profuse painless prolonged periods since 2 months, progressive enlargement of lower abdominal swelling and loss of appetite for 2 months. She had developed swelling of the left leg for 1 week. Menarche was at the age of 14. Menstrual flow was normal and painless, till 2 months ago when she had developed menorrhagia.

She had been married for 4 years and had a term pregnancy 2 years ago without complication.

Family history, personal history and past history were not significant.

On Physical examination the patient was found to be an ill-nourished, anaemic, individual. Non-pitting oedema of left lower limb was present. There was no lymphadenopathy. Cardiovascular and respiratory systems were normal.

Per Abdomen

There was a soft irregular swelling of 28 weeks' size of varying consistancy, partly nodular, partly cystic, arising from the pelvis occupying the hypogastric, left iliac, left lumbar and umbilical regions with restricted mobility in all the directions. Tenderness was present over the tumour and engorged veins were seen over the abdomen. Bimanual pelvic examination revealed a normal sized uterus. Lower pole of the tumour was felt through the anterior and lateral fornices.

Diagnosed as malignant ovarian tumour, preliminary routine investigations were done. Endometrial study showed mainly blood clot with mucin and occasional glands.

Laparotomy was done on 23-6-'77. The left ovary was the seat of the tumour, enlarged to 36 weeks' size with smooth surface but necrotic. It was extending up on the left side under the diaphragm with many adhesions to the neighbouring structures. The tumour was extending posteriorly extraperitoneally. The adhesions were released as much as possible. The tumour had a smooth surface, was very friable and adherent to the aorta and it was not possible to remove the entire tumour. The uterus, right ovary and tubes were normal, but adherent posteriorly and could not be removed. As the patient collapsed during surgery abdomen was closed in layers after obtaining complete haemostasis. The patient was resuscitated with blood and steroids.

On the 5th postoperative day, patient developed severe dyspnoea due to pleural effusion and ascites.

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Cyclophospamide, 2 gm was given in 5% dextrose drip. Ascites cleared remarkably on 9th day but reappeared later. On the 11th post-operative day patient developed transient loss of consciousness. Secondaries in the brain were excluded. On the 17th postoperative day at 8.40 P.M. (10-7-77) patient became unconscious, and expired. Microscopic appearance of tumour presented a pattern of Endodermal Sinus Tumour.

Discussion

In 1939 Schiller described a group of tumours which he named mesonephroma. They contained 'glomeruloid structures,' hence the name. Teilum (1950, 1959, 1965) doubted this concept and demonstrated the resemblance of these glomeruloid structures to the endodermal sinuses of Duval.

The patient presents with a history of acute abdominal pain. It may be accompanied by nausea vomiting and a low grade fever. Very occasionally there is merely abdominal swelling and discomfort. Menstrual upset is uncommon. The case report presented with progressive enlargement of lower abdominal swelling and menorrhagia.

These tumours are of moderate size, globular or ovoid in shape with a degree of lobulation, and greyish in colour, soft in consistency. Necrosis and haemorrhage are present, ascites and pleural effusions may be present, mostly blood stained. This tumour presents a bewildering histologic picture. The 'glomeruloid' like structures, consist of papillary tuft of endodermal epithelium containing a core mesoblast and a single capillary. This papillous projects into a sinus cavity—Schiller-Duval body. (Fig. 1 and Fig. 2) Although this tumour is highly malignant, mitotic activity is not necessarily very frequent.

Prominent extra- and intra-cellular aggregates of material corresponding to PAS positive hyaline globules similar to that identified in the basement membrane of yolk-sac, less than 7 weeks size was found.

Alpha foetoprotein is present in the blood of these patients with endodermal sinus tumour. This is not a diagnostic test as it may be found in other malignant germ cell tumours. Attempts have been made to use this test to monitor the treatment of patients. But according to Esterhay (1973), while the concentration of alpha foetoprotein falls after treatment, recurrence which is almost inevitable is not accompanied by an increase.

This tumour is inevitably fatal. Majority of patients have a rapid, progressive downhill course and die within 12 months of diagnosis, despite removal of localised disease.

Huntington and Bullock (1970) felt that conservative surgery rather than radical would suffice for increased survival. Chemotherapy has been reported to be almost of no benefit in the treatment of this tumour until recently.

The case reported here had relatively conservative surgery though not completely followed by chemotherapy. But pleural effusion, ascites progressively developed and she expired on the 17th post-operative day.

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