LYMPHOSARCOMA OF OVARY

(Report of a Case)

by

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Lymphosarcoma of the ovary is a rare ovarian tumour. It was first described by Kundrat in 1893, as reported by Nelson et al. (1958), who found only four cases in which the lesion was designated as primary ovarian lymphosarcoma and twenty-four cases where the ovarian involvement was considered to be secondary. Johnson and Soule (1957) report, from the necropsy records of Mayo Clinic, the secondary ovarian involvement in ten out of forty-three female cases who died of malignant lymphoma over an eight year period, without presenting gynaecological signs or symptoms when alive. Lucia and co-workers (1952) also reported from necropsy studies two cases of ovarian involvement out of eleven females with malignant lymphomas.

Zeigerman et al. (1956) in a review of literature found two primary cases and three secondary cases of lymphosarcoma and added one more case.

Collins and Piper (1962) mention six reported cases of primary type and also add one more case of theirs to the existing series.

Sirsat and Amin (1963) also report a case of primary ovarian lymphosarcoma.

As this entity is so rare in the group of malignant ovarian tumours, as seen by the reported incidence, we felt that a report of such a case is warranted.

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Case Report

P.M., Hindu, aged 18 years, was admitted on 16th January 1962 in the Gynaecological department of the Cama and Albless Hospitals, Bombay. She complained of continuous and severe pain in the abdomen along with its enlargement since twenty days. Her appetite was normal and she gave no history of vomiting, haematemesis, fever or cough.

She was married for one year and had never menstruated.

General examination: She was a woman of short stature, and of poor nutrition. There was absence of axillary or pubic hair, and no evidence of hirsutism on the face or the body. Her breasts were poorly developed. The external genitalia were normal. The posterior cervical lymph glands were palpable but not tender. All the other systems showed no abnormality.

Temperature on admission was 98°F., the pulse rate was 80 per minute and the respiration rate was 18 per minue.

The examination of the abdomen reveal-

ed three separate masses. A mass, size 13.50 cm. x 11.25 cm., was found on the right side of the abdomen (rising up to one cm. below the umbilicus), the lower pole was felt one cm. above the pubic symphysis. Its surface was smooth, and its consistency was firm. The edges of the mass were well defined and it was mobile. A similar mobile mass 12.5 cm. x 12.5 cm. was palpated on the left side of the abdomen, its lower pole was felt at the level of the anterior superior iliac spine.

A third much smaller mass 2.5 cm. x 2.5 cm. in size was palpable in the epigastrium. It was also mobile and not tender. No free fluid was present in the abdomen. The liver and spleen were not palpable.

Vaginal examination revealed the cervix pushed to the left and backwards and uterine body pushed to the right and downwards. Both abdominal masses were not felt per vaginam.

Investigations

Blood: Red blood cell count — 3.1 mil./cmm., leucocytes 10,100/cmm., Hb. 65%, erythrocyte sedimentation rate 26 mm. at the end of one hour, Group B III. The differential leucocyte count was: polymorphs 65%, lymphocytes 25%, large mononuclear 8%, eosinophil 1%, basophil 1%.

Urine examination: 35-40 pus cells per field.

Stool examination: Ova of round worms detected.

On screening, the chest was found clear.

Intravenous pyelography revealed hydronephrosis on the right side. Left kidney and ureter were found normal.

Examination under anaesthesia. Pelvic findings confirmed. The uterus measured 5.50 cm. and on curettage no endometrial tissue was obtained.

Progress

From 27th January 1962, the patient started getting fever with rigors. A differential diagnosis between a malignant ovarian tumour and tuberculosis of the abdomen was considered. Considering her young age and primary amenorrhoea it was thought advisable to give her antitubercular therapy as a therapeutic test. But while receiving this treatment free fluid appeared in the abdomen and the abdominal masses increased in size and she developed distension of upper abdomen.

On 7th February 1962, 150 ml. packed cells blood transfusion was given. As there was no improvement in the patient's condition and tuberculosis of the abdomen was ruled out, it was decided to do a laparotomy, the pre-operative diagnosis of a malignant ovarian tumour being uppermost in our mind, with the possibility of it being either a primary ovarian adenocarcinoma, dysgerminoma or Krukenberg's tumour.

on 12th February 1962, under general anaesthesia, the abdomen was opened by a midline subumbilical incision; on opening the peritoneal cavity green coloured fluid gushed out.

Right ovarian tumour size 17.6 cm. x 13.2 cm. x 13.2 cm., kidney shaped, solid, vascular and friable had undergone two twists round the pedicle; right ovariotomy done.

The tumour in the left ovary was of dimensions 13.2 cm. x 6.6 cm. x 6.6 cm. and left ovariotomy done. The uterus was normal in size and had no metastases. Intestines were matted together and the mesentery was studded with tiny glands. A large part of small intestine was involved in the growth but no attempt was made to resect the gut or remove the glands as the patient's condition was too low to stand radical surgery. The liver was palpated and found normal. The abdomen was closed.

Post-Operative Course

The patient's progress was uneventful till the fifth post-operative day when marked abdominal distension from ascites appeared and many secondary deposits were felt per abdomen. On the seventh post-operative day the abdominal wound burst open and three pints of ascitic fluid was aspirated. The abdominal wound was resutured but her condition deteriorated and she expired on 23rd February 1962, eleven days after the operation.

A permission was obtained for partial necropsy.

Specimen

Right ovary: 17.6 cm. x 13.2 cm. x 13.2 cm., was kidney shaped, solid, vascular and friable.

Left ovary: 13.2 cm. x 6.6 cm. x 6.6 cm. with fallopian tube stretched over it.

The cut surface was greyish white, fleshy and homogeneous with areas of haemorrhage and cystic degeneration.

Histological findings: The tumour was composed of diffusely arranged small round cells with large pale cells scattered among them. The cells showed dense nuclei occupying most of the cell, surrounded by a narrow rim of cytoplasm. Mitotic figures were seen. Fig. 1 & 2 stain by Gomori's silver impregnation method showed tumour to be rich in reticulum.

Diagnosis. Lymphosarcoma (ovary).

Autopsy Specimens

Section of stomach with a large greyish white soft mass attached was removed.

Microscopic examination showed the mucosa and submucosa partly infiltrated by dense collection of small round cells. The cells showed small dense nuclei surrounded by a narrow rim of cytoplasm.

Section of small intestine showed a similar change.

Section from the mass attached to stomach showed diffusely arranged tumour cells with large areas of necrosis.

Some of the mesenteric nodes showed almost complete replacement by tumour cells.

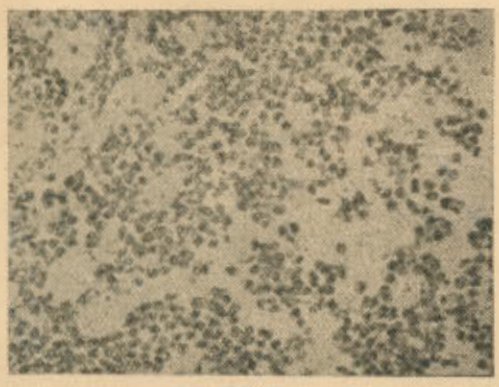

Fig. 1.

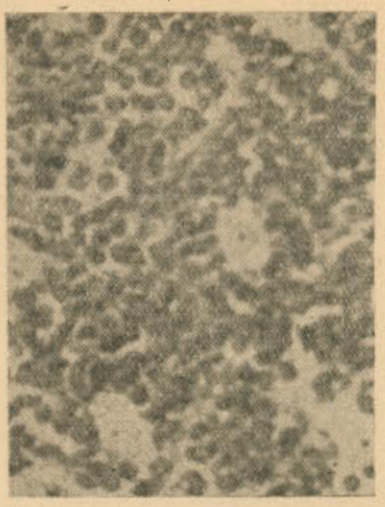

Fig. 2.

Comments

Lymphosarcoma of the genital tract occurs as a part of a generalised lymphoreticular disease. The term primary or secondary cannot be applied to this variety of tumour.

Nelson et al. (1958) and Zeigerman and co-workers (1956) are of the opinion that lymphomas are multicentric in origin. Hence it is best to consider this tumour of multicentric origin, and ovaries, tubes, uterus, lymph nodes, stomach and intestinal tract are different sites involved in this generalised disease of highly malignant disorder.

Nelson et al. (1958) in their paper question the possibility of lymphoid tissue in normal ovary although they believe that lymphoid tissue may be found in ovary as a result of previous inflammation in the pelvis. The other possibility of lymphoid tissue in the ovary as thought by Durfee et al. (1937) may be found in the pre-existing ovarian teratoma.

The cases recorded as primary ovarian lymphosarcoma were believed to be so because the tumour in the ovary was the largest mass present according to Durfee et al. (1937), and Walther (1934) considered his case of ovarian tumour as of primary type because at laparotomy the retroperitoneal nodes were minimally enlarged in spite of a large left ovarian tumour. The case of primary ovarian lymphosarcoma reported by Seigerman and co-workers (1956) died nine months after removal of the primary tumour and no gross lesions were found outside the ovaries in any other organs at the time of operation.

Collin and Piper in 1962 report a case of lymphosarcoma of ovary treated by them by operation and deep x-ray therapy. Four years later she developed axillary nodes for which she received a course of nitrogen mustard therapy and as reported was well and under observation. This case may be considered as a case of primary lymphosarcoma.

Hence it is futile to classify these tumours either as primary or secondary. These lesions are of multicentric origin and arise at different sites at the same time.

The age of patient as reported by Nelson and co-workers (1958) in most cases varied from thirty to fifty-eight years. Novak (1962) reports a case of Dr. D. M. Grayzel of lymphosarcoma of ovary, secondary to lymphosarcoma of the caecum in a girl of sixteen years.

The symptoms reported are lower abdominal pain, anorexia, loss of weight and menorrhagia.

Adnexal masses and involvement of lymph glands are common features. The survival period varied from ten days to two years.

The interesting and varied features in our case are:

(1) The age of patient, being only eighteen years, differed from the recorded age incidence of thirty to fifty-eight years.

(2) Primary amenorrhoea was present in our case. This was not a common type of menstrual disorder in the reported cases where either the menstrual periods were normal or they suffered from menorrhagia.

(3) In considering the pre-operative differential diagnosis one had to keep in mind the possibility of abdominal or genital tuberculosis along with other malignant ovarian tumours.

(4) Even after autopsy it was not possible to conclude where the primary site of the tumour was, but very large bilateral ovarian tumours make one opine in favour of primary ovarian involvement.

Summary

A case of ovarian lymphosarcoma is reported in a young woman with the unusual symptom of primary amenorrhoea.

The short duration of symptoms and rapid termination of patient's life confirm the extreme malignant nature of this neoplasm.

No attempt is made to classify this case into primary or secondary type of ovarian lymphosarcoma and the accepted view of multicentric origin of this variety of neoplasm is upheld.

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