DYSGERMINOMA OF OVARY COMPLICATING PREGNANCY

B. CHAKRABARTY,* M.B.B.S., D.G.O. (Cal.), M.R.C.O.G. (Lond.)

Introduction

Dysgerminoma is a rare ovarian tumour. Its association with pregnancy is much rarer hence the difficulty in diagnosing it during pregnancy. When first examined in the later months of pregnancy, the correct assessment of any abdominal fumour is difficult and one is forced to postpone the diagnosis by laparatomy until the foetus is delivered, provided of course the tumour is not obstructing labour. A case is reported here where the correct diagnosis could not be made even after laparotomy by naked eye examination—it was only after histological examination that the true nature of the mass was diagnosed. The case is reported from a district hospital which has no arrangement for histopathological examination and it would be difficult to diagnose these cases correctly without routine histology.

Case Report

B. D., aged 30 years, para 8 + 0, was admitted in the maternity ward on 22-6-64 at 10 A.M. complaining of pain in abdomen. Examination revealed that she was about 28 weeks' pregnant with a huge lump occupying the whole of the upper abdomen. The patient was in labour and the mass appeared to be separate from the uterus. Vaginal examination showed that no portion of the mass was occupying the pelvis. The patient delivered herself normally as breech on the same day i.e. 22-6-64 at 5.30 P.M. The baby, a female, was premature and weighed only 4 lbs. It died on 24-6-64; death was ascribed to prematurity.

Past obstetric history: Of her eight children four were alive and well, the other four died in infancy from various diseases. The youngest was 2½ years old. She now had two daughters and two sons. There was no intersex in the family.

History of present pregnancy: The patient consulted her physician for excessive enlargement of abdomen only a week before hospitalisation. This enlargement as she said was sudden and repid.

Postpartum: Before delivery a provisinal diagnosis of ovarian tumour was made, but after delivery the tumour seemed to occupy the whole of the abdomen, pushing the uterus to one side. Surgical opinion was sought to exclude splenic, renal or hepatic tumour. The mass had very little mobility and twisted ovarian tumour was the most probable preoperative diagnosis. It was decided to do a laparotomy, but her general condition was low and she was anaemic. Haemoglobin 55% (Sahli) on 2-7-64 with total white cell count of 4,800/c.m. She had 2 bouts of severe postpartum haemorrhage which was controlled by ergometrine and blood transfusion. No vaginal interference was done as the outline of uterus could not be clearly demarcated per abdomen.

Laparotomy was performed on 3-7-64. A huge solid mass, rather soft to feel, was found arising from the uterus. The mass filled up the whole of the abdomen. Right tube and ovary were separately identifiable, but the left ovary was incorporated in the mass. The appendix was also attached to

Department of Obstetrics & Gynaecology, Rao J. N. Roy Hospital, Berhampur (West Bengal).

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Fig. 1
Photograph showing the uterus with the tumour.

Fig. 2
High power microphotographic view of the tumour attached to uterus showing giant cells.

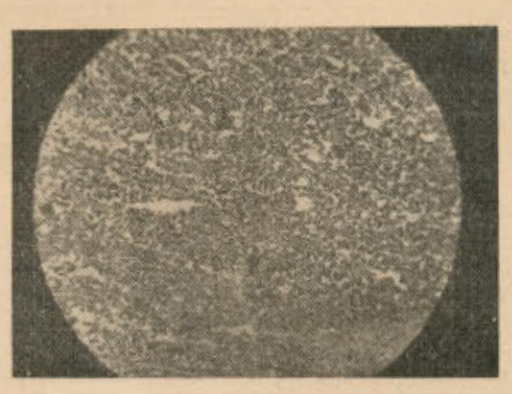

Fig. 3
Low power microphotographic view of the tumour attached to uterus showing the picture of dysgerminoma.

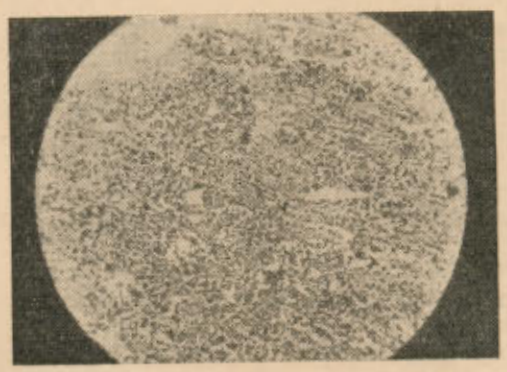

Fig. 4
Microphotograph of the mass attached to lateral wall of pelvis showing the picture of dysgerminoma.

the mass. There was a separate oval mass 3″ x 2″ attached to the left pelvic wall which looked more like an enlarged lymph node. The whole mass was very friable. A diagnosis of sarcoma of the uterus was made.

Removal of the whole growth with total hysterectomy, bilateral salpingo-oophorectomy and appendicectomy starting from the base of appendix was done en mass. The growth on the lateral pelvic wall was also removed and it was of the same friable nature as the main growth. The pelvic clearance was complete, but no attempt was made to remove parametria or to do block dissection of lymph nodes. The liver showed no evidence of secondary metastases. The omentum and mesenteric lymph nodes showed no apparent metastases.

The patient required 4 pints of blood during operation. A portion of the main growth and a portion of the lateral pelvic mass was sent for histology.

Histological slide nos. H $\frac{448}{64}$ & H $\frac{449.}{64}$

Both the main growth and the lateral pelvic growth showed characteristic micro-

scopical picture of dysgerminoma of ovary. There were small nests and cords of polyhedral cells with round hyperchromatic neuclei and scant cytoplasm. The cells were separated by abundant, loose trabeculated fibrous tissue infiltrated with lymphocytes. Multineucleated giant cells were frequent.

Postoperative: The patient started having high rise of temperature from the second postoperative day. She was put on streptomycin 1 grm. daily and crystaline pen cillin 5 lacs twice daily. There was no remission of temperature after a week's treatment and broad spectrum antibiotic—tetracycline I.m. 100 mg. 6 hourly was started. There was no improvement after a week's treatment. There was no localising sign and no cause for the temperature could be detected. The lungs were x-rayed on three occasions for any evidence of metastases or lung abscess but there were none. The temperature varied from 100° — 104°F and was persistent in nature. The blood on repeated exam nation showed mild leucocytosis—10,000 to 12,000/c.m. with polycytosis—75 to 85%. The urine showed presence of few pus cells and furadantin was started, but there was no improvement. Due to lack of laboratory facilities, blood culture, urine cullture and sensitivity tests could not be done. The patient was finally put on chloramphenicol for a week, but still there was no improvement and the patient gradually went downhill. Erythromycin was tried as a last resort without improvement. To combat anaemia, she had another 2 pints of blood transfusion during this period. In spite of all efforts the patient died 45 days after the operation. The relatives did not allow postmortem examination. The patient's mental condition was always alert and she never complained of headache to sign fy any cerebral metastases. In a more modern unit this postoperative death was possibly avoidable.

Discussion

Dysgerminoma is included in the group of functioning tumours of the ovary along with granulosa-cell tumours and arrhenoblastomas, but unlike these it has no hormone secreting property. The only way it is sex linked is that it is said to be common in women who suffer from gonad deficiency and occasionally in pseudohermaphrodites. In the case reported the patient had no evidence of sexual deficiency, as she was multiparous. That the tumour is not hormone secreting is evidenced by lack of its effect on the newborn foetus.

As to histogenesis, Meyer believes that these arise from neutral cells of ovary, which is perhaps nothing but the formative parenchyma. Willis believes it to be a seminoma from testicular tubules in bisexual gland,

Like other functioning solid ovarian tumours, it is found in a relatively younger age group. Most cases are below the age of 30 years, though it can also be found in older women.

As regards its malignancy, opinions differ. Macleod and Reed regard it as highly malignant, while others maintain that only 25% are malignant. Pedowitz et al., collected 102 cases from literature — survival rate of 70 cases that could be followed was only 27.1%. In most cases the tumour was encapsulated and small in size, bilateral in about one-third of the cases, but extrapelvic metastases were not rare—Doderlein found that 25% had extrapelvic metastases. In this case, the tumour secondarily involved the uterus to such an extent, that sarcoma of uterus was thought to be the most probable diagnosis.

As to treatment of these cases, the question becomes tricky as the tumour is often found in young girls between 15 to 20 years. In view of the high rate of recurrence and malig—

nancy, radical pelvic clearance would be justified. When the tumour is well encapsulated with no evidence of secondaries and the patient is young and nulliparous, many would tend to conservative surgery by removing just the affected ovary and feel satisfied by observing the patient at frequent intervals. This may sometimes prove disastrous and gradually more gynaecologists are inclined to remove the uterus and both ovaries, as the metastases might be microscopical.

Dysgerminoma in association with pregnancy has been very rarely detected. Schoemaker et al., reported a case in 1947. Muller et al. observed only 11 cases associated with pregnancy in a series of 427 cases. Misra and Watson each report a case.

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