

PRIMARY OVARIAN PREGNANCY

(A Case Report)

by

B. L. RASTOGI,* M.D., D.C.P.,

I. M. GUPTA,** M.D., F.C.C.P.

and

B. N. PRASAD,*** F.R.C.S. (Lond.),

Primary ovarian pregnancy must be considered a rare obstetric and gynaecologic complication. It is one of the rarest type of ectopic pregnancies and occurs about once in 25,000 to 40,000 deliveries, with a ratio of 0.7 to 1.7 ovarian per 100 ectopic pregnancies. In a thorough review of entire English literature, Boronow *et al* (1965) mentioned only 62 authentic cases and added 3 of their own. Additional 71 cases have been collected by Pugh *et al* (1973) since then, and they added besides these, 5 cases of their own. Very recently, Duckman *et al* (1974) have reported a single case. Thus, to date in the English literature 142 authentic cases of primary ovarian pregnancy have been mentioned.

In the Indian literature, isolated case reports or small series of primary ovarian pregnancies have been mentioned. While reviewing the literature in this part of the world we could come across only 22 cases of primary ovarian pregnancies. The incidence mentioned, however, is very

much similar to western countries (1.02% of all ectopic pregnancies—Shakuntala *et al*, 1967).

CASE REPORTS

Mrs. S.D., 35 years old woman, was admitted on 25th of March, 1973 with the history of a progressively increasing lump in the lower abdomen of 11 months duration. For the last four months, its size has almost been constant. The lump was of ill defined outline in the lower abdomen reaching up to the umbilicus but the lower limit of it could not be felt. She had amenorrhoea for two months followed by lower abdominal pain and bleeding per vaginam off and on. The blood was dark in colour mixed with passage of pinkish tissue (? shreds of decidua).

Vaginal examination revealed a firm and bluish coloured cervix. The lump could be felt higher up in the right ovarian fossa and on bimanual palpation it was found to be in relation with the right ovary. The uterus, however, could not be felt separately but appeared adherent with the mass.

Obstetric history: She was mother of 4 children aged 14, 12, 9 and 6 years. The last delivery took place 6 years ago.

Menstrual history: With the commencement of menarche at the age of 14 years, she menstruated every 28 days, bleeding lasting for 4-5 days and the blood flow was moderate in amount.

Operative findings: Abdomen was opened with subumbilical midline incision. There was a big mass in relation to the right ovary. The uterus was adherent to the mass. However, there

*Lecturer in Pathology, Institute of Medical Sciences, Banaras Hindu University, Varanasi-221 005, India.

**Professor and Head of the Department of Pathology, Institute of Medical Sciences, Banaras Hindu University, Varanasi-221 005, India.

***Surgeon-in-charge, Ram Krishna Mission Hospital, Varanasi-221 001, India.

were no adhesions between the mass and the omentum or the intestines.

Pathology: Grossly, (Figs. 1 and 2), ovary was enlarged ruptured and cystic with an attached cord and foetus. It was well encapsulated and measured 12 x 8 x 4 cms. with stretched out Fallopian tube coursing over its surface. At one end it was pitted and bluish white. At most of the places it was lustreless and showed orangish discolouration and punctate haemorrhages. The wall, where it had given way, was papery thin and orange. Internally, it was completely covered over by thin translucent membranes with a circular disk-shaped raised area of 6.8 c.m. to which cord was attached eccentrically. It measures 22.5 c.m. in length and was attached to the foetus at the other end. The foetus appeared well developed. Radiologically, it showed the presence of ossification centres in calcanium and talus bones (28 weeks; Fig. 3). Resected uterus with cervix measured 8 c.m. in length having a slit like endometrial cavity, Nabothian follicles on the cut surface of the cervix, and a smooth, unilocular cyst of 3 c.m. in the contralateral ovary.

Microscopically (Figs. 4 and 5), remnants of corpora albicantia and the ovarian capsule were still identifiable while most of the ovary was destroyed and replaced by invading chorionic villi and trophoblasts. The villi show degenerative and ischaemic changes and wide areas of old haemorrhages in between. Vascularity of the organ was increased though a number of vessels were endarteritis. In the vicinity of haemorrhages and degenerated villi, chronic inflammation—characterised by lymphocytes and mononucleus—was seen. No corpus luteum was demonstrable in the ovary. Endometrium was in the secretory phase and was free of the trophoblastic elements.

Discussion

Rapid, accurate pregnancy tests, culdocentesis, culdoscopy, culdotomy, and laparoscopy lead to early and accurate diagnosis.

Various opinions have been expressed regarding the genesis of ovarian pregnancy. Curtis (1942) states primary ovarian pregnancy occurs after tubal fertilisation. The fertilised ovum regurgitates back into the ovary and gets implanted

inside the graafian follicle. Woolner (1932) believes fertilisation occurs within a ruptured follicle in the intrafollicular type of ovarian pregnancy from where the ovum cannot come out. In the superficial variety fertilised ovum grows on the surface of the ovary and subsequently burrows deep into the substance. Novak (1962) opines that commonest site of implantation of such ovum is ovarian cortex.

Majority (75%) of these ovarian pregnancies terminate in the first trimester and only 12.5% advance to reach the third trimester (Baden and Heins, 1952). Greater likelihood of ectopic ovarian pregnancy reaching the full term is attributable to ovarian stroma which is capable of hypertrophy since its vascular supply can meet the increasing demand of growing foetus, provided the ovarian pregnancy survives the first trimester (Rama-vaish, 1965).

Demonstration of ovarian tissue with chorionic elements and development of foetus in relation to the ovarian sac with an attached cord leaves no doubt that the present case is of an advanced ovarian pregnancy. There was in addition evidence of secondary inflammatory change in the wall of the viscus and also evidence of recurrent microhaemorrhages.

Histologic evidence of thickened arterial channels and endarteritis is also of significance and ischaemia has resulted in intraabdominal death of the foetus. At operation besides the ovarian pregnancy several blood clots were noted probably indicating a silent incipient rupture occurring earlier. Absence of demonstrable corpus luteum in the involved ovary favours an intra follicular implantation (Bobrow and Winkelstein, 1956). In the reported cases of advanced ovarian pregnancies from India one of the instances

exemplified a case of full term ovarian pregnancy with live foetus (Chaphekar, 1970), and in others the pregnancy had reached over 26 weeks (Rakshit, 1964; Savitri Devi *et al*, 1967; Rama-vaish, 1965; Kalyanikutty *et al*, 1969; Bhagyamma, 1964). Our present case also falls in line with these observations.

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See Figs. on Art Paper XIII-XIV