

Ovarian Tumor During Pregnancy

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Summary

Ovarian tumor during pregnancy is a perplexing problem. Co-existence of ovarian mass with pregnancy can have severe impact on the outcome of pregnancy. We are presenting our experience of 9 cases of ovarian tumor requiring laparotomy during pregnancy at L.T.M.G. Hospital Sion. There were 2 primigravidas and 7 multigravidas. The mean age of the patients was 23.5 years. In 6 patients elective laparotomy was done. 4 patients had benign teratoma, while in 1 patient the tumor was malignant. Two patients had preterm delivery while 5 patients delivered vaginally.

Introduction

Ovarian tumor during pregnancy is a serious complication. Though the literature shows wide variation in the incidence, it is probable that the incidence of ovarian enlargement in pregnancy is the same as in the non-pregnant state.

Apart from increase in size, complications like torsion, hemorrhage, infection & rupture may occur in the tumor during pregnancy. Similarly, presence of tumor may adversely affect the outcome of pregnancy like abortion, preterm labor and obstructed labor. In many cases laparotomy has to be performed during pregnancy itself.

Surgical removal of ovarian tumor during pregnancy was first reported by Burd in 1846 (Hess et al 1988). In following years, various authors examined the issue of expectant verses surgical therapy for ovarian tumor during pregnancy.

Here we present our experience of 9 cases of ovarian tumors requiring laparotomy during pregnancy at our institute. The study has done over a period of 6 years (1993-1998) in one unit of the department of obstetrics of the department of obstetrics and Gynaecology, L.T.M.G.H, Sion, Mumbai.

Material, Methods & Results

The data presented is from a single working unit of the Dept. of Obstetrics & Gynaecology at L.T.M.G. Hospital over a period of 6 years. During this period there were 7,183 deliveries, while the total number of confinements were 9422. There were 14 patients of ovarian tumor of significance of which 9 patients required laparotomy during pregnancy.

Majority of the patients were in the age group of 20-25 years. The mean age of the patients was 23.5 years. There were 2 primigravidas and 7 multigravidas in this series.

Patients presented with various symptoms. Five patients had complaints of abdominal pain, 4 patients presented with lump in abdomen while 2 patients came with the complaints of vomiting and bleeding per vaginum. Two patients in the series were asymptomatic.

A thorough clinical examination, blood investigations and ultrasound was performed in all the patients. Ultrasound helps in diagnosis of co-existence of pregnancy with ovarian tumor and its nature. Leiomyoma of uterus should be ruled out by ultrasound as treatment is mainly conservative in nature. Ultrasound also helps to rule out other causes of lump in abdomen like pelvic kidney and renal cyst. Ultrasound done on a good machine and in expert hands can pick up torsion and hemorrhage in the tumor which requires immediate intervention.

Five patients underwent laparotomy at 13-20 weeks period of gestation, while in 1 patient laparotomy was done after 37 weeks (table I). Three patients with clinical and ultrasound signs of complications, required emergency laparotomy, while elective procedure was done in remaining 6 patients.

Table I

POG at Admission /Laparotomy (Weeks)	No. of patients
< 12	1
13-20	5
21-28	2
29-36	Nil
> 37	1

Preoperatively, injectable tocolytics and antibiotics were given to all patients. During surgery the contralateral ovary was inspected and pregnancy was minimally handled.

Table II

Procedure Done	No. of patients
Ovarian cystectomy	2
Ovariectomy	4
Salpingo-oophorectomy	1
Ovariectomy with Biopsy of contralateral Ovary	

In 7 cases, the tumor was unilateral, while it was bilateral in 2 cases. Largest tumor was 12 x 14cm in size while the smallest was 4 cm in diameter. In 3 cases where emergency laparotomy was done, it was a twisted ovarian tumor in 2 cases, while in 1 case it had undergone hemorrhage. Ovariectomy was the most

common procedure performed, while biopsy of the contralateral ovary was done in 2 cases. (Table II).

On histopathology, diagnosis of Benign teratoma was confirmed in 4 cases. One tumor turned out to be malignant on histopathology (Table III).

Table III

Histopath Report	No. of Patients
Benign Teratoma	4
Haemorrhagic cyst (Bilateral)	1
Follicular cyst (Bilateral)	1
Paraovarian cyst	1
Cystadenoma	1
Malignant Tumor	1

Postoperatively the patients were continued on tocolytics and fetal growth was monitored. One patient who underwent emergency laparotomy with 10 weeks period of gestation aborted 8 days after laparotomy. Six patients reached term, while 2 patients delivered before 37 weeks. There were 4 babies with low birth weight in the series while there was one neonatal death.

Regarding mode of delivery, 5 patients had a normal vaginal delivery while in one patient LSCS was done for fetal distress. In one patient where ovarian tumor was detected at 37 weeks, elective LSCS with removal of ovarian tumor was done at 38 weeks.

One patient of emergency laparotomy with 10 weeks period of gestation aborted 8 days after laparotomy. There were 2 preterm deliveries and no other complications were noted in this series. Six patients delivered after 37 wks while 2 delivered before 30 wks POG. Four babies weighed more than 2500 gms while 2 babies were below 2000 gms. Remaining 2 babies were between 1500 to 2000 gms, 1 of which died because of prematurity with RDS. There were no congenital anomalies. This information has been mentioned in the text. (Table IV).

Table IV

Mode of Delivery	No. of Patients
Normal vaginal	5
Forceps	1
Twins	1
LSCS	1
Elective LSCS with ovarian cystectomy	

Discussion

Co existence of pregnancy with ovarian mass is always a perplexing problem for the obstetrician. The presence of a cystic ovarian mass may be simply either an exaggerated physiological reaction or it may be a serious life threatening problem like ovarian malignancy. Fortunately, association of ovarian tumor and pregnancy is not very common. The incidence ranges from 1:80 to 1:2500 per live birth in various studies (Hess et al 1988), Tawa et al. 1964). Also only 2-5% of tumors that are removed during pregnancy are malignant (Tawa, 1964). During pregnancy ovarian mass is more prone for complications which is then manifested clinically. But sometimes the mass may be diagnosed in a totally asymptomatic patient during routine pelvic examination or by obstetric ultra sound. Hess et al advocated that laparotomy in such cases should be done before the onset of symptoms. (Hess et al, 1988). Numerous publications indicate that outcome of pregnancy is better if laparotomy is done electively before the onset of symptoms than done in emergency. In our study also the only adverse outcome i.e. abortion following laparotomy occurred in a case of emergency laparotomy done for twisted dermoid.

Though laparotomy is performed on emergency basis in symptomatic complicated cases, management in case of asymptomatic patients changes with period of gestation. Struyk and Treffers (1984) suggested that women with ovarian mass detected in 1st trimester should be observed until 16th week of pregnancy, the policy that would allow resolution of functional cysts, prevent excision of corpus luteum, avoid risk of spontaneous abortions and avoid possible adverse effects of anesthetic agents on the fetus. (Struyk and Treffers, 1984).

They also suggested that all significant adnexal masses that persist after 16 weeks should be electively removed to avoid delay in diagnosis of possible malignancy and to avoid risk of complications like

rupture, torsion, hemorrhage, infection, obstruction of labor. (Struyk and Treffers, 1984).

They further suggested that asymptomatic mass first detected in the 3rd trimester be observed till fetal maturity. This is to avoid possibility of spontaneous preterm labor and technical difficulties of laparotomy. Once the fetal maturity is attained they recommended elective caesarean section with removal of the mass. (Struyk and Treffers, 1984).

This problem also emphasizes routine use of ultra sound in all obstetric patients which can detect adnexal mass in relatively asymptomatic patients.

Though Thorton and Wells (1987) suggested that observation and expectant management with periodic ultrasound monitoring of unilocular simple masses throughout pregnancy is appropriate, most of the authors recommend elective removal of any mass > 6cm that persists until 16 week of gestation regardless of its sonographic appearance, unless the mass is suspected to be a uterine leiomyoma (Hess et al, 1988, Struyk and Truffers, 1984, Thorton & Wells, 1987).

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