

Ovarian Tumors in Pregnancy – A Retrospective Analysis Over One Year

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Summary

The results of eleven women who were operated for an ovarian tumor diagnosed during pregnancy over a period of one year were analysed. The incidence of ovarian tumors complicating pregnancy was 1 in 1163 births. Of the tumors removed 81.8% were benign and 18.2% were malignant. 72.7% of the pregnant patients were operated before 16 weeks. Perinatal outcome was good with 72.7% delivering at term while 18.18% had preterm vaginal delivery. Ovarian tumors during pregnancy should be removed as soon as possible if clinical or sonographic features raise the suspicion of malignancy.

Introduction

Ovarian tumors are relatively uncommon complications of pregnancy. However when they occur, they pose a challenge to the obstetrician because the gravid uterus may prevent adequate palpation of the ovarian mass or they may be detected when they produce complications like torsion and hemorrhage. Most ovarian enlargements during pregnancy are follicular or corpus luteum cyst which regress as pregnancy advances. Functional cysts more than 6 cms or ovarian tumours are rare. Because of the rarity of ovarian tumors complicating pregnancy their characteristics and operative interventions during pregnancy continue to be a dilemma. The present study evaluates their mode of presentation, methods of early diagnosis and surgical intervention with maternal outcome.

Material and Methods

The present study is a retrospective analysis of

11 cases of ovarian tumors diagnosed during pregnancy over one year from March '96 to Feb '97 at Smt. Sucheta Kriplani and associated hospitals, Lady Hardinge Medical College, New Delhi. The present series deals with those cases in which the ovarian tumors clinically detected were confirmed on ultrasonography to be more than 6 cms and needed surgical intervention during pregnancy, delivery or postpartum. Functional cysts less than 5 cms were excluded from the series.

Observation

There were 12,797 deliveries over the same period with an incidence of ovarian tumors in pregnancy of approximately 1 in 1163 births. Age of the patients in this series ranged from 20-31 years with the mean age of 24.8 + 4.1 years. Three patients were nulliparous, seven were P1 and one was P3. Four patients were detected in the Ist and IInd trimester each and 3 during the IIIrd trimester of pregnancy.

Table I shows the time of diagnosis and surgery.

Table I: Time of Diagnosis / Surgery

Time	At Diagnosis	Surgery	Emergency	Elective
I st Trimester	4 (36.36%)	4 (36.36%)	2	2
II nd Trimester	4 (36.36)	4 (36.36%)	1	3
III rd Trimester	1 (9.09%)	(0%)	-	-
Labour	2 (18.18%)	2 (18.18%)	2	-
Post Partum	-	1 (9.09%)	-	1

All the 11 cases were managed surgically. Five (45.5%) were operated as emergency for suspected torsion or hemorrhage or during caesarean section. Six (55.5%) were taken up electively after preoperative hydroxyprogesterone acetate and tocolytics. Intra and postoperative antibiotics were given to all.

The nature of complications in 11 patients who underwent surgery is shown in Table – II.

Table II – Complication During Pregnancy

Complication	n(%)
None	4 (36.36%)
Pain	4 (36.36%)
Torsion	3 (27.3%)
Rupture	2 (27.3%)
Obstruction	1 (9.09%)
Malignancy	2 (18.18%)

* Multiple complications were seen in four patients

Four (36.36%) were free of complaints and were incidentally detected, on routine ultrasound, antenatal examination, accidental finding at ligation or caesarean section.

Histopathological examination of ovarian tumors removed showed benign growth in 9 cases (81.8%) and malignant in 2 (18.2%) (Table III)

Table III: Shows Histopathological Type of Ovarian Tumor Functions

Histopathological Classification	n (%)
* Serous cystadenoma	4 (36.36)
* Mucinous cystadenoma	1 (9.09)
* Dermoid Cyst	3 (27.3)
* Endometriotic Cyst	1 (9.09)
* Dysgerminoma	1 (9.09)
* Mucinous cystadeno CA	1 (9.09)

Patients with benign growth underwent cystectomy or oophorectomy. Patient with dysgerminoma was in stage Ia on laparotomy and one with mucinous cystadenocarcinoma was stage Ic. Patient with dysgerminoma was young and underwent unilateral oophorectomy at 16 weeks and that with mucinous cystadenoma was taken for TAH with BSO in the postpartum period with adjuvant chemotherapy.

Perinatal outcome of patients with ovarian tumor is shown in Table IV.

Table IV: Perinatal outcome during pregnancy

Outcome	Number (%)
Spontaneous abortion	0 (0)
Elective termination	1 (9.09)
Preterm delivery	2 (18.18)
Term deliveries	8 (72.7)

* Of the term deliveries 3 had caesarean section and 5 had spontaneous vaginal delivery.

Patients with malignant ovarian tumor are still on follow up without recurrences. One with mucinous cystadenocarcinoma is on adjuvant chemotherapy and doing well.

Discussion

Ovarian tumors in pregnancy is a diagnostic and therapeutic problem. The incidence of ovarian tumors has been variedly quoted as 1 in 80 live births (Eastman & Hellman 1996). Ovarian cysts large enough to be hazardous or requiring surgery have reportedly been varying from 1 in 328 (Grimes et al) to 1 in 800. (Chung & Birnbaum 1973) to 1 in 640 births (Struyk & Treffers, 1984). In our series the incidence of 1 in 1,163 is lower than the above figures.

First trimester is clearly the best time to diagnose ovarian tumors even though they are rarely symptomatic during this period, and are discovered on routine pelvic or ultrasound examination. Struyk & Treffers (1984) discovered 54% of their patients with ovarian tumors during 1st trimester and 37% were without symptoms. Ashkenazy et al (1988) found majority of their patients were diagnosed in first trimester and around 13.0% were asymptomatic while 81.5% presented with pain with or without bleeding. Dgani et al (1988) found 43.5% of patients suffering from ovarian tumors during 1st trimester and 74% of the total were symptomatic, abdominal pain being the most important symptom. In our series 36.3% were diagnosed during Ist and IInd trimester each and a similar number were symptomless. Only 9.09% were identified during IIIrd trimester. Pain was the commonest

mode of presentation in 36.3%, similar to the findings of above workers.

The most serious complication of ovarian tumors is malignancy and fortunately it is an uncommon one. Chung and Birnbaum (1973) quoted an incidence of 1 in 25,000 pregnancies, Munnel (1963) quoted malignancy as 1 in 18000 pregnancies, while Struyk and Treffers (1984) found malignancy in 4.0% of their cases. Similarly Ashkenazy et al (1988) found malignancy rate of 4.3% amongst their series. Dudley et al (1996) noted that only 1 to 2% of ovarian tumors during pregnancy were malignant. In our series the incidence was 1 in 6,398 births and appears higher than that reported earlier.

There is no agreement in the relevant literature concerning the need and appropriate gestation for operative intervention in cases of ovarian tumors in pregnancy. While Struyk & Treffers (1984), advocated a 'wait and see' policy until the 16 WK and for those diagnosed in second trimester they advocated temporization of treatment. Csapo et al (1972) have shown that removal after 7 wk did not give rise to decrease in serum progesterone. Similarly Ashkenazy et al (1988) stressed that ovarian tumors during pregnancy should be removed as soon as possible, irrespective of the age of pregnancy. In our case we operated 36.36% patients in first trimester without any adverse outcome. Also a similar, 36.36% were operated early in second trimester where majority had elective surgery. However, the outcome amongst the emergency and elective surgery was not different.

Conclusion

The evaluation and management of ovarian tumors complicating pregnancy is different from such tumors in non-pregnant women. The outlook of malignant tumor in pregnancy is much better than non pregnant as they are detected earlier. Also when suspicion of malignancy is high, operative intervention should be undertaken earlier in gestation rather than procrastination until grave consequences.

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