

OVARIAN TUMOURS COMPLICATING PREGNANCY

A clinical analysis of 22 cases from Government Maternity Hospital, Hyderabad-A.P. for 1961-1965.

by

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A review of literature on ovarian tumours complicating pregnancy shows great variations in incidence, pathology, characteristics and management. They pose challenging sions at Government Maternity Hospital, Hyderabad, there were 22 cases of ovarian tumours complicating pregnancy, giving an incidence of 1 in 2465. Table I shows the incidence

TABLE I
Incidence

Grimes et al	Glasgow Maty. Hospital	Univ. Coll. & Hosp.	Queen Charl. Hosp.	Eden Hosp. Calcutta	Govt. Maternity Hospital, Hyderabad
1-81	1-1500	1-1400	1-591	1-2200	1-2465

clinical problems, as most of them are seen as emergencies and have to be differentiated from ectopic pregnancy, and acute surgical conditions like appendicitis. Diagnosis of the condition depends to a great extent on the clinical acumen of the obstetrician.

Data from Government Maternity Hospital, Hyderabad.

Incidence: The incidence quoted by various authors varies from 1 in 85 to 1 in 8000. For the period 1961-1965, out of 54,238 obstetric admis-

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of this condition according to various authors and in our series.

Relationship to age and parity— Table II shows the relationship to age and parity. Gustafson found no particular relationship to age and parity. Booth found a higher incidence in age groups 26-30 and in multiparas. Chowdary reported similarly. The distribution of age and parity of our series is similar to that of other authors.

Varieties of Tumours complicating pregnancy: The distribution of types of ovarian tumours complicating pregnancy according to various authors and of our series is seen from Table III. Dermoid cysts are seen to

TABLE II
Relationship to age and parity

Authors	Age groups						Parity						
	16-20	21-25	26-30	31-35	36-40	40 & over	0	1	2	3	4	5 & above	
Chowdary, Eden Hospital	6	4	8	2	1	3	4	4	6	2	0	8	
Present series, Govt. Maternity Hospital	2	5	9	4	1	1	2	3	1	2	5	9	

TABLE III
Varieties of ovarian tumours

Authors	Total cases	Dermoids	Ser. cyst	Pseudo-mucinous	Papillary	Endometrial	Parovarian	Malignant	Functional	Solid
Caverly (1931)	69	33	22	5	0	0	4	1	4	..
Child & (1944) Douglas	23	7	7	2	0	0	1	2	4	..
Gustafson (1954)	45	18	11	4	0	2	2	0	5	3
Hamilton and Higgins (1949)	21	5	6	0	0	2	1	4	2	1
									(undiagnosed)	
Hass (1949)	25	13	3	1	0	2	1	2	3	..
Booth (1963)	41	18	12	5	2	4	..
Chowdary (1962)	24	14	5	4	0	0	0	1	0	0
Present series Govt. Maty. Hospital (1961-'65)	18	5	4	3	0	0	3	3	0	0

be commoner than other types. Caverley reported an incidence of 48.5% dermoids in pregnant women, whereas Spencer reported 27%. There were 5 dermoids out of 18 operated cases in our series, giving an incidence of 28%. There were 3 malignant ovarian tumours in our series, two were teratomas and one was a papillary serous cyst adenocarcinoma, showing an incidence of 13.6 per cent.

Location of tumour: Grimes *et al* found unilateral cysts twice as often on the left side. Haas found the reverse. Booth found 52% on the right side, and 26% on the left side, with 6% bilateral. In our series 50% were above the pelvic brim, 50% below the pelvic brim, 50% on the right side and 50% on the left side.

Duration of pregnancy at the time of diagnosis of the tumour:

Table IV reveals the distribution of cases with respect to duration of pregnancy at the time of diagnosis, according to other authors and the present series. Eleven cases (the maximum number) were diagnosed in the second trimester of pregnancy.

Clinical features and diagnosis:

Incidence of the condition depends on frequency, diagnosis and acumen of the clinician. Early cases are symptomless and can be diagnosed only by routine pelvic examination and early prenatal care. Complications can thus be avoided. Most cases were diagnosed due to symptoms of complications, the commonest com-

TABLE IV
Duration of pregnancy at time of diagnosis

Authors	Pregnancy			Labour	Puerperium
	1st trimester	2nd trimester	3rd trimester		
Chowdary	15	6	1	1	1
Present series Govt. Maty. Hospital	5	11	1	5

plication noticed was torsion of ovarian cyst.

Table V shows the main presenting symptoms in our series of cases. Thirteen out of 22 cases (59%) complained of pain in the abdomen, and 10 out of 22 (48%) complained of mass in the abdomen.

Pre-operative diagnosis of complications and confirmation at laparotomy is shown in Table VI. Of the 22 cases, 8 cases did not have any complication and 8 cases were diagnosed as torsion of the ovarian cyst, with 6 confirmed on the table.

Two cases were admitted as inevitable abortions and aborted prior to laparotomy. One case was diagnosed

as threatened abortion, which was carried to term successfully, after the removal of the tumour.

There were 3 cases of infected ovarian cysts diagnosed in the puerperium.

Management: All the tumours were removed as soon as diagnosed. Three cases were diagnosed at first attendance in the antenatal clinic. Five cases were diagnosed in the first trimester of pregnancy. Eleven cases were diagnosed in the second trimester of pregnancy, one case in the third trimester and five during the puerperium. After routine sedation and adequate intravenous fluids, immediate laparotomy was carried

TABLE V
Symptoms at the time of admision

No.	Symptoms	No. of cases
1.	Pain	13
2.	Mass abdomen	10
3.	Vomiting	1
4.	Fever	2
5.	Bleeding per vaginam	3

TABLE VI
Pre-operative diagnosis of complications and confirmation at operation

No.	Complications	No. of cases	Confirmed at laparotomy	Not confirmed
1.	Torsion ovarian cyst	8	6	2
2.	Inevitable abortion	2	2
3.	Threatened abortion	1	1
4.	Infection	3	1	2 (not operated)
5.	No complications	8	8
		22	18	4

out, under gas and oxygen anaesthesia. Postoperatively they were put on morphia 1/6 gr. every 6 hours for 48 hours. No hormones were given. Seventeen out of 22 cases were operated on during pregnancy and 1 during the puerperium. Four cases refused operation. The patient operated on during puerperium was diagnosed as encysted fluid. She was operated 3 weeks after delivery to find an infected teratomous cyst of the ovary which ruptured and resulted in severe peritonitis. This patient expired 48 hours after operation. Two of the operated cases were found to be malignant ovarian tumours at 20 weeks pregnancy where radical surgery was done with termination of pregnancy. One was a papillary serous cystadenoma suggestive of malignancy, and later confirmed histopathologically. The other was a pseudomucinous cystadenoma

which looked benign and had an ovariectomy done. It was later reported as a teratoma of the ovary. After 3 weeks, the patient had a second laparotomy when a total hysterectomy with removal of the remaining tube and ovary was undertaken.

Types of operation done in relation to duration of pregnancy is shown in Table VII. Ovariectomy was done in 11 cases. Ovarian cystectomy was done in 3 cases. Salpingo-oophorectomy was done in 2 cases of paraovarian cysts.

Total hysterectomy with bilateral salpingo-oophorectomy was done in 2 cases with termination of pregnancy in the second trimester for malignant ovarian tumours complicating pregnancy.

Results: The effect of removal of tumour on pregnancy, in the cases operated is shown in Table VIII. Out

TABLE VII
Type of operation in relation to duration of pregnancy

No.	Nature of operation	Total No. of cases	1st trimester	2nd trimester	3rd trimester	Puerperium
1.	Ovariectomy	11	3	6	1	1
2.	Ovarian cystectomy	3	1	2	0	0
3.	Salpingo-oophorectomy	2	1	1	0	0
4.	Total hysterectomy with bilateral salpingo-oophorectomy	2	0	2	0	0
		18	5	11	1	1

TABLE VIII
Effect of removal of tumour on pregnancy

No.	Type of operation	No. of cases	Abortion (pre-puerperium). operative)	Prem. labour	Spontaneous delivery (term)	Termination pregnancy
1.	Ovariectomy	11 (1 during puerperium).	2	2	6	..
2.	Ovarian cystectomy	3	0	1	2	..
3.	Salpingo-oophorectomy	2	0	0	2	..
4.	Total hysterectomy with bilateral salpingo-oophorectomy	2	0	0	0	2

of 18 cases operated 13 delivered spontaneously, 10 at term and 3 prematurely. Pregnancy was terminated in 2 cases. Two patients, admitted as inevitable abortion, aborted prior to laparotomy. There was no foetal mortality. Maternal mortality was 4.5%.

Comments: Removal of tumours as soon as diagnosed can prevent complications. Early diagnosis is possible with early antenatal care. Non-ovarian tumours and surgical conditions are to be differentiated. Parovarian cysts are difficult to diagnose preoperatively. Radiology may help in diagnosis of dermoids. Abortion need not be feared as an effect of ovariectomy. Risk of primary carcinoma of the ovary complicating pregnancy is rare. Three out of 22 cases in our series were found malignant. Delay in surgery should be avoided to facilitate early diagnosis. There is no justification to postpone intervention till the puerperium. Late in pregnancy caesarean section at terms with removal of tumour is required.

Summary

1. Twenty-two cases of ovarian tumours complicating pregnancy from Govt. Maternity Hospital, Hyderabad have been analysed (1961-1965).

2. Eighteen cases were operated. Four refused operation.

3. 28% of tumours were dermoids and 16% were primary carcinomas. Risk of malignancy cannot be ignored.

4. No deleterious effects on pregnancy were noted.

5. Foetal mortality was nil. Maternal mortality was 4.5 per cent.

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