

HEART DISEASE IN PREGNANCY

by

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A clinical study of cases of heart disease with pregnancy was undertaken under the combined supervision of the departments of Medicine and Obstetrics at Medical College Hospital, Jabalpur, in 1958. The study is still in progress and this paper records a few preliminary observations made during the past three years. Our observations are related to those cases of chronic rheumatic endocarditis with pregnancy who came to us in cardiac failure. We are, however, fortunate

that the general incidence of rheumatic heart disease in our area is high. The incidence of rheumatic heart disease with pregnancy is about 2.78%. We had 26 cases of heart failure in this series.

The total admissions in Obstetric Wards were 12,132, and the incidence of cardiac heart disease complicated with pregnancy comes to .046%.

According to age grouping, there were 9 cases above 30 and 17 cases below the age of 30 years.

Relation of Age Group and Parity

Years			Under 20	21-25	26-30	31-35	36-40	
Multipara	(22)	0	3	10	6	3
Primipara	(4)	2	1	1	0	0

Primipara	2nd	3rd	4th	5th	6th	7th	8th	9th	10th
4	5	3	4	3	3	2	0	1	1

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Our youngest patient was 18 years old and the eldest 40 years of age. The age distribution and parity were related as under:

There were 4 primiparas and 22 multiparas. According to parity they were grouped as under:

Parity in itself did not give any indication as to what is going to

happen in the present pregnancy. Out of these 26 cases, there were 4 cases of left ventricular failure while the rest were cases of right-sided failure.

veries per patient. The average length of labour was 18 hours in primiparas and 9 in multiparas. There were no significant differences. In this series there were no thera-

Relation of Cardiac Failure to Duration of Pregnancy in Weeks

Duration in weeks	No. of cases	Left sided	Right sided
12 weeks and under	5	1	4
13 weeks to 27 weeks	6	3	3
28 weeks to 32 weeks	9	1	8
33 weeks to 40 weeks	4	0	4
Post-partum	2	0	2

There were 5 deaths in this series and, out of these, 3 cases died of left ventricular failure. The mortality rate in cases who came with left ventricular failure was high and its incidence was about 15.3%. It is interesting to compare these figures with those of M. Jones (—) though the criteria are not similar.

peutic abortions but sterilisation was done in 3 patients.

History and Outcome of Labour

There were 14 cases who had full-term normal labour. Seven antenatal cases were admitted with cardiac failure. They went home when heart

Total cases 1000	Total failure 95 cases	Congestive failure 68 cases (13% mortality)	Pulmonary oedema 27 cases (41% mortality)
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Incidence of heart failure, according to Lewis Memorial Hospital report, is 14.3%.

Our over-all maternal mortality from heart disease was 10%. But in those who came with cardiac failure it was 15.3%. Mortality is higher in those who had inadequate medical care. Anaemia associated with heart disease was found in 2 cases, both of them, however, are still alive. In 15 patients the onset of failure could be related to upper respiratory infection while in 11 cases no precipitating factor was evident.

There were 26 patients who delivered 105 times, average is 4.03 deli-

was well compensated and never came back for follow-up. Four cases were admitted in puerperal period with cardiac failure and only one case was admitted with a picture of spontaneous abortion who died suddenly due to pulmonary oedema.

From this it is clear, in left-sided cardiac failure we could not find any co-relation between the duration of pregnancy or antenatal care to the mortality rate. This is something very depressing to the treating doctor. We have been interested in assessing accurately and evaluating the fitness for pregnancy in patients likely to have acute pulmonary

Relation of Mortality to Duration of Pregnancy and Antenatal Care

Type	Case no.	Parity	Age	Duration of pregnancy	Precipitating causes	Antenatal care (A.N.C.)	Leison
Right ventricular	11	5th para	27	16 weeks abortion	respiratory	16 week	M.S.
Failure	18	1st para	18	15th day post-partum	"	nil	M.S. + M.I.
Left ventricular	7	1	22	died 36th week pregnancy	nil	20th week	M.S.
	20	4	27	died 14th week	nil	12th week	M.S. + M.I.
Failure	5	2	30	4th post-partum day	nil	32 week	M.S.

oedema in this type of patients. These patients with right-sided failure are usually already incapacitated to some degree. This does not apply to cases who develop acute pulmonary oedema, which can occur any time from 14th week to post-partum. Cardiac grouping is not of reliable value in pulmonary oedema. The right-sided failure shows a close correlation to the hoemodynamic changes of pregnancy. Maximum

cases occur when these reach their peak. In cases which occur outside these, usually a precipitating factor is traceable. This does not apply in cases developing acute pulmonary oedema. Treatment is more effective in controlling right heart failure and is responsible for the better prognosis in this as compared to the left.

Reviewing the cases who went in for pulmonary oedema a few points need emphasis.

Patient numbered	Age	Parity	Leison	Observation started	Death	Remarks
7	22	1	M.S.	20th week	36th week	patient was quite well and suddenly went into pulmonary oedema and expired
8 Previous still birth	25	2	M.S.	14th week came with pulmonary oedema	recovered	
20	27	4	M.S. + M.I.	12 weeks	death 14th week	sudden death
5	30	2	M.S.	32 weeks	died in another place 4th post-partum day	sudden

There were 4 cases of acute pulmonary oedema and in none the cause of this was clear. There was adequate antenatal supervision in Case No. 7, which started from 20th week, and all was well till the patient died suddenly at 36th week. (Fig. 1). Our

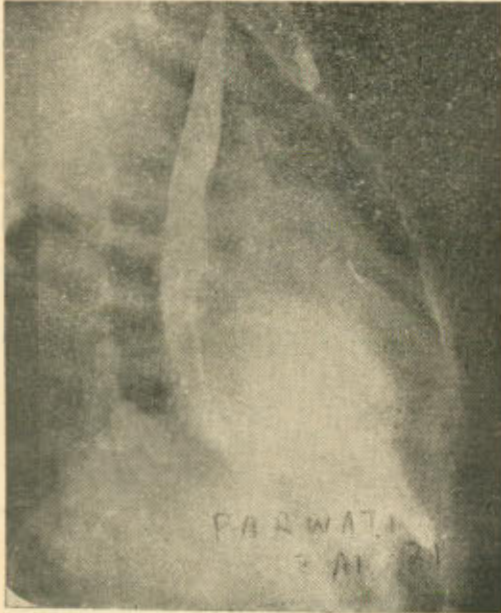


Fig. 1
Case No. VII 20th week.
Right anterior oblique view showing left auricular enlargement.

routine is to X-ray the patient every 3 months in right anterior oblique view. This was done in Cases No. 7 and 8. In Case 7 on comparing the right anterior oblique view, there is an indication of increase in size of left auricle. In Case 8, size of left auricle remained the same (Figs. 2, 3). If this had been taken as a warning signal, a timely valvulotomy might have saved her. We request our colleagues to work further in this direction and collect cases who show this sign and evaluate the effect of valvu-



Fig. 2
Case No. VII 33rd week.
Right anterior oblique view showing further left auricular enlargement as compared with the previous x-ray.

lotomy in such cases.

This radiological feature requires further study and is worth keeping in mind so that it may indicate as to how the patient is going to behave.

Summary

A study of 26 cases of heart failure with pregnancy was conducted at Medical College, Hospital, Jabalpur, from 1958 to 1960. There was 12,132 obstetric admissions during this period. Five patients died and pulmonary oedema was the commonest and dreaded cause of death which was often unpredictable and affected those with good cardiac grade even with young age. Majority of the pa-

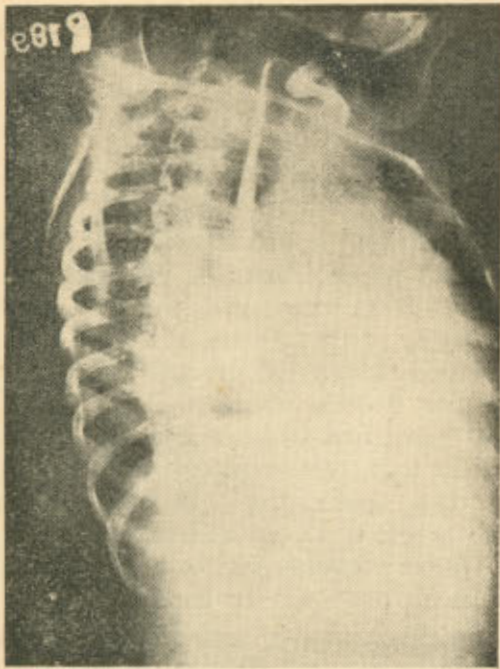


Fig. 3
Case No. VIII
Right anterior oblique view showing left auricular enlargement. On further observation the left auricular enlargement was also of the same extent after three months interval.

tients were multiparae between 25-30 years of age. Precipitating factors were more easily recognised in right sided heart failure cases but the left sided heart failure still presented a therapeutic problem. A radiological observation has been described and its further evaluation has been suggested.

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