

HEART DISEASE IN PREGNANCY

by

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SUMMARY

Various aspects of 76 cases of pregnancy with heart disease have been studied.

It is obvious that heart disease in pregnancy though a potentially dangerous disorder can be successfully managed without jeopardising the maternal and/or fetal outcome by close co-operation between the patient, obstetrician and cardiologist.

Introduction

Heart disease in pregnancy though a grave and serious condition is fortunately not so common a disorder. With improving facilities for diagnosing and evaluating cardiac disorder, pregnancy with its tremendous cardiovascular implications, is no longer the ominously hazardous condition that it used to be in the past. Early identification, better stabilization, intensive monitoring and prompt management of any complication have all greatly contributed in reducing the morbidity and mortality from this serious disorder.

Materials and Methods

The present study of heart disease complicating pregnancy is based on the analysis

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of cases records of all such patients at the Nowrosjee Wadia Maternity Hospital, over a 3 year period from January 1982 to December 1984. During this period, all patients suspected to be suffering from heart disease during pregnancy, were referred to a cardiologist and after confirmation of the diagnosis were designated and looked after as 'high-risk Pregnant' patients. Cardiologist's opinion was sought as and when necessary and close watch was kept during antenatal, intranatal and postnatal period for any complications.

Results and Discussions of clinical material

(1) Incidence

In the present series there were 76 confirmed cases of heart disease out of 26,136 deliveries, giving an average incidence of 0.29%. This is lower as compared to other series as shown in Table I.

TABLE I
Incidence of Heart Disease in Pregnancy
Reported by Different Authors

Author	Year	Incidence in %
Barnes	1968-71	0.43
Ashar <i>et al</i>	1970	0.53
Deshmukh <i>et al</i>	1979	0.55
Sikdar	1980	0.42
Dumir and Sathe	1976-80	0.66
Present series	1982-84	0.29

(2) Age distribution

Majority (75%) of the patients were in the active reproductive age group of 20-29 years.

TABLE II
Age Distribution

Age in years	No. of patients	Per cent
15-19	5	6.6
20-24	34	44.7
25-29	23	30.3
30 and above	14	18.4

TABLE IV
Type of Lesion

	No. of cases	Per cent
(a) Rheumatic heart disease	63	83.0
Mitral stenosis (MS)	56	
Mitral incompetence (MI)	5	
MS + MI	2	
MS + pulmonary hypertension	26	
(b) Congenital heart disease	9	12.0
V.S.D.	5	
A.S.D.	3	
P.D.A.	1	
(c) Others	4	5.0
Cardiomyopathy	2	
Chronic stable heart block	2	

(3) Parity distribution

While 92% of the patients were para 2 or less 8 patients were para 3 or more.

TABLE III
Parity Distribution

Parity	No. of patients	Per cent
0	33	43
1	19	25
2	18	24
3	3	4
4 and above	3	4

(4) Type of lesion

While rheumatic heart disease constitutes the commonest cause of heart disease in pregnancy (83% in present series) others like congenital heart disease, chronic stable heart block and cardiomyopathy may also be seen in a few patients.

(5) Antenatal profile

Analysing the antenatal profile, we find that the majority of heart patients had registered in the second trimester of pregnan-

cy while 2 out of 76 were emergency unbooked admissions; 8 patients who had been in the past advised early antenatal registration registered in the first trimester itself.

Another yardstick to determine adequacy of antenatal care was the number of antenatal visits and as shown in the Table. while 68.9% visited us adequate number of times the remaining 31.1% visited us on less than three occasions.

(7) Complications in pregnancy

In our series in the antenatal period we encountered no complications in 61 patients. Eight patients had congestive cardiac failure (CCF) requiring hospitalization and 2 patients had arrhythmias which could be brought under control.

In the intrapartum phase 5 patients had CCF and none had arrhythmia, while in the postpartum phase 3 patients had CCF and

TABLE V
Antenatal Profile

Trimester of registration	No. of patients	Per cent
First	8	10.5
Second	49	64.5
Third	17	22.4
Unbooked	2	2.6
No. of antenatal visits		
Less than 3	23	31.1
3-5	36	48.6
Equal to or more than 6	15	20.3

(6) Consultation with cardiologist

The successful management of a pregnant cardiac patient demands close and complete co-operation between the patient, her cardiologist and her obstetrician and as shown in Table VI, while 46 patients visited our cardiologist on 2 occasions 14 patients required consultation more often.

Eight patients were seen by the cardiologist in the intrapartum period for various reasons while the rest were seen in the postpartum phase.

none had arrhythmias and 1 patient had subacute bacterial endocarditis.

In spite of encountering these complications we did not have a single maternal mortality on account of heart disease complicating pregnancy.

(8) Surgery for cardiac pathology

Surgery as a means of management has a very definite though restricted place in the treatment of pregnant cardiac patients.

TABLE VI
Consultation With Cardiologist

	No. of patients	Per cent
In antepartum period—		
No consultation	16	21.05
2 consultations	46	60.52
More than 2 consultations	14	18.42
In intrapartum period	8	10.52
In postpartum period	58	76.3

TABLE VII
Cardiac Complications in Pregnancy

	Ante-natal	Intra-partum	Post-partum
None	61	68	70
Congestive cardiac failure	8	5	3
Supraventricular tachycardia	1	—	—
Ventricular premature beats	1	—	—
Subacute bacterial endocarditis	—	—	1

While none of our patients had to undergo cardiac surgery during pregnancy, 6 patients had undergone the same in the pre-pregnant state. These surgically treated patients did not require any specific line of treatment throughout their confinement.

TABLE VIII
Surgery for Cardiac Pathology

	No.	Per cent
During pregnancy	None	—
Pre-pregnancy	6	7.8
(i) Valvotomy	4	
(ii) Correction of atrial septal defect	2	

(9) Mode of delivery

While the phenomenon of parturition can be quite taxing to the pregnant cardiac patient, majority of these women fortunately have uncomplicated deliveries. In our series, 47 out of 76 women had a spontane-

ous uncomplicated vaginal delivery; 23 patients required forceps assistance while 5 patients had to undergo a caesarean section.

(10) Birth weights

Analysing the birth weights of the babies we find that the majority of them weighed 2.4 kg or less while about 10% of babies weighed more than 3 kg. Whatever be the reason, this decreased birth weight definitely contributes to an easy delivery.

TABLE X
Birth-weight Distribution

Birth-weight in kg	Number	Per cent
Less than 2	7	9.2
2.0-2.4	36	47.4
2.5-2.9	26	34.2
3.0 and above	7	9.2

Maternal and Fetal Risks

Throughout the period of study we did not have a single maternal death on account

TABLE IX
Mode of Delivery

	No. of patients	Per cent
Spontaneous vaginal delivery	47	61.8
Forceps		
Outlet	11	14.4
Low midcavity	12	15.7
Vacuum application	1	1.3
Lower segment caesarean section		
Emergency	3	3.9
Elective	2	2.6

of heart disease complicating pregnancy.

There was only one neonatal death of a premature baby 1.4 kg birth weight, cause of death being prematurity with respiratory distress syndrome.

Contraceptive Advice

Out of 24 patients who were para 2 and above, 12 underwent ligation, 6 refused ligation and in 6 instances the husbands agreed to get vasectomised. Barrier contraception (condom) was the most common temporary contraception preferred and advised to our patients.

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