

A STUDY OF HEART DISEASE WITH PREGNANCY IN GOA

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SUMMARY

Fifty-two patients of heart disease with pregnancy seen in Dept. of Obstetrics and Gynaecology, Goa Medical College were studied from July 1975 to June 1980 giving an incidence of 0.56%.

Rheumatic heart disease constituted 86.54% and congenital heart disease 11.54%. Mitral Stenosis is the commonest single lesion encountered. 53.85% had normal term deliveries. There were no maternal deaths.

Introduction

Pregnancy poses special problems, both medical and obstetric, in a cardiac patient. With good antenatal care, a greater number of patients are detected with heart diseases particularly congenital heart diseases, many of whom were passed off as having a "functional murmur". A marked decrease in maternal mortality in pregnant cardiac patients has been reported. This reduction has been due to a number of factors including a better understanding of the cardiovascular adaptations to pregnancy, improvement in medical therapy, and surgical treatment of heart disease in general and some changes in the pattern of heart disease.

This is a review of 52 cases of heart disease with pregnancy that were admitted to the Goa Medical College,

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Ribandar Hospital between July 1975 to June 1980.

Incidence of Heart Disease: During this five year period of study there were 52 cases of heart disease with pregnancy. During the same period, there were 9,342 admissions for deliveries giving an incidence of 0.56% of heart disease with pregnancy. The incidence of heart disease found in association with pregnancy is reported to be between 0.2 to 3.6%. Pinto Rosario and Kuthalia (1975) reported an incidence of 0.46%, Parvati Pai Raiturkar and Anjeneyulu (1974)—0.34% while Deshmukh *et al* (1978)—0.55%.

The 52 cases observed were in an age group of 19 to 41 years. The prevalence of heart disease was highest in the age group of 19 to 24 years (40.38%). The oldest patient was 41 years, the youngest 19 years. Twenty patients (38.46%) were primigravidae, whereas 32 cases (61.54%) were multigravidae. 67.31% of patients were booked in the hospital while 32.69% were unbooked.

Types of Heart Disease

The analysis of different types of heart disease is shown in Table I.

TABLE I
Types of Heart Disease

Types	No. of cases	Percentage
Congenital	6	11.54
Rheumatic	45	86.54
Miscellaneous	1	1.92

The miscellaneous type mentioned consisted of a patient having Cor-Pulmonale secondary to tuberculosis of lungs.

Table II indicates the types of cardiac disease, as reported in literature.

In Western countries the relative incidence of congenital heart disease is increasing because of the elimination of

streptococcal infections and rheumatic fever at an early stage in children. Surgical correction of severe congenital defects before puberty has allowed many such patients to undertake child bearing whereas without surgery this would have been considered far too dangerous. At the Boston Hospital for women, the rheumatic heart disease accounted for 88% of the pregnant cardiac patients from 1921 to 1938, but only 61% of that group from 1960 to 1971 (Messer, 1972).

A variety of cardiac lesions were encountered as shown in Table III.

In the series of Pinto Rosario and Kuthalia (1975), mitral stenosis was the predominant single mitral lesion in 93% of patients, in Pai Raiturkar's series (1974) 71%, while Deshmukh *et al*; (1978) reported a much lower incidence

TABLE II
Types of Cardiac Disease

Authors	RHD (%)	CHD (%)	Others (%)
Masani (1953)	90	5	5
Rebello (1968)	77.3	22.7	0
Ashar <i>et al</i> (1970)	79	12.5	8.5
Parvati Pai Raiturkar and Anjeneyulu (1974)	90	1.5	8.5
Deshmukh <i>et al</i> (1978)	85.21	14.79	0
Present Series	86.54	11.54	1.92

TABLE III
Cardiac Lesions

Cardiac Lesions	No. of Cases	Percentage
Mitral stenosis	37	71.15
Mitral incompetence	2	3.84
Mitral stenosis and mitral incompetence	2	3.84
Aortic valve lesions	2	3.84
Mitral valve lesions with Aortic valve lesion	2	3.84
Atrial septal defect	3	5.77
Ventricular septal defect	1	1.92
Chronic Cor Pulmonale	1	1.92
Falot's Tetralogy	1	1.92
Congenital Nodal Rhythm with atrial; extra systoles	1	1.92

of 48.59%. Mitral incompetence was found in an incidence of 3.84% in contrast to that of Deshmukh *et al* (1978) and Parvati Pai Raiturkar and Anjenayulu (1974) who reported an incidence of 12.67% and 12% respectively. Double mitral lesions in Deshmukh series (1978) were reported in 9.85%, whereas mitral valve with aortic valve lesions in 4.22% of cases.

We had no case either of hypertensive or syphilitic heart disease in our series. However, Deshmukh *et al* (1978) reported incidence of 2.81% of hypertensive heart disease, while Parvati Pai Raiturkar and Anjeneyulu reported 6.9% cases as syphilitic and 1.5% of tuberculous origin.

Grading of Heart Disease

The patient's cardiac status was evaluated according to the classification of the New York Heart Association and is presented in Table IV.

TABLE IV
Grade of Cardiac Disease

Grade	No. of Cases	Percentage
I	6	11.54
II	15	28.85
III	14	26.92
IV	17	32.69

Only 11.54% of our cases were asymptomatic in contrast to the figures reported by Deshmukh *et al*, (1978) and Pai Raiturkar and Anjeneyulu (1974) comprising of 62.67% and 30.76% respectively. Ananthasubramaniam *et al*, (1978) reported an incidence of 56.7% of their cases in Grade III and Grade IV while Deshmukh *et al*, and Parvati Pai Raiturkar and Anjeneyulu reported 8.44% and 53.83% in their series respectively. Amongst the 67.31% of booked case of our series, only 8.57% were admitted in failure, whereas amongst the unbooked

cases, failure was more commonly encountered occurring in 41.17%. Cardiac failure occurred most commonly between 25 to 32 weeks with the peak incidence of 33.33% between 25 to 28 weeks.

Conditions Complicating Pregnancy

Anaemia was present in 57.69%. There was no case in our series whose haemoglobin was less than 6 gm%. Ananthasubramaniam *et al*; (1978) reported an incidence of 37.4% of cases having moderate to severe anaemia, whereas Parvati Pai Raiturkar and Anjeneyulu (1974) had in their series 45.38% cases, 16% of which were severely anaemic (below 6 gms%).

Respiratory tract infections were seen in 13.46% of our cases of which 2 patients had basal pneumonia. Pre-eclampsia was seen in 5.77% of our cases which is similar to the incidence of 3% reported by Ananthasubramaniam *et al* (1978).

The incidence of cardiac arrhythmias was 13.46%. Ananthasubramaniam reported atrial fibrillation associated with acquired heart condition in 5.88% of cases. There was 1 case of antepartum haemorrhage (1.92%). Ananthasubramaniam *et al*; (1978) report their incidence of antepartum haemorrhage as 2.94%; whereas Parvati Pai Raiturkar report an incidence of 3.84%.

We had 2 patients who had residual lesions after previous mitral commissurotomy.

Mode of Termination of Pregnancy and Delivery

Out of 52 cases of our series, 53.85% had normal term deliveries, 13.46% had premature vaginal deliveries, 3.84% had assisted breech deliveries, 7.69% each

were delivered by forceps and vacuum extraction while 5.77% underwent a caesarean section. One patient had a spontaneous abortion while 2 patients were advised a first trimester suction evacuation on medical grounds. Ananthasubramaniam (1978), reported 67.62% patients with spontaneous vaginal delivery, 26.07% forceps delivery and 5.77% had to undergo caesarean section for strict obstetric indications. In the present study there was no foetal loss. Ananthasubramaniam *et al* (1980) have reported 9.5% foetal mortality. There was 1 neonatal death (2.05%) due to intracranial haemorrhage as a result of instrumental delivery. Deshmukh *et al*, (1978) reported two neonatal deaths and one still birth in 128 deliveries. Ananthasubramaniam *et al* (1980) had 4 neonatal deaths in her series of 105 deliveries.

The safety of a small family and the necessity of using some type of contraceptive was impressed on all our patients. 26.92% of our patients underwent tubectomy, whereas 9.61% of husbands had themselves vasectomised. Temporary methods of contraception were used by 40.37% of our cases, out of which 23.07% used condoms. Since we have a sizable catholic population in our community, safe period was used as a method of contraception by 17.3% and no method of contraception by 23.07%. No patient was advised an I.U.C.D.

Maternal Mortality

There was no maternal mortality in our series. Deshmukh *et al* (1978) reported 4 deaths amongst 142 cases. Ananthasubramaniam *et al* reported a rate of 2.9%. The high rate of pregnant cardiac women are admitted as emergencies, most

of them anaemic and with no antenatal care. Our nil maternal mortality could be due to early detection of pregnant cardiac patients, good antenatal follow up, joint management by cardiologists and obstetricians good acceptance of some form of contraceptive method and effective social welfare programme.

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