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Maternal Outcome in Patients of Cardiac Disease in Pregnancy at Tertiary Care Centre

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Abstract **Original Research Article**

Background: Heart disease complicates at least 1% of pregnancies. There are two groups of cardiac disease in women of childbearing age: Congenital and acquired heart disease. Acquired heart disease includes rheumatic heart disease (RHD), cardiomyopathies and ischemic heart disease. Cardiac disease is usually secondary to streptococcal infections. ***Material and methods*:** This was a retrospective study conducted in the Department of Obstetrics and Gynecology at Rural Medical College, Loni between the period of July 2020 to November 2021. A total of 52 pregnant women with cardiac disease were admitted during the study period. Data was collected from previous hospital records. ***Results*:** A total 52 pregnant women with cardiac disease were included in the study. Total number of deliveries during this period was 13806. The incidence of cardiac disease was found to be 0.37%. Present study showed that the predominant lesion Rheumatic Heart Disease seen in 41 patients comprising 78.84% of patients of cardiac disease visiting our hospital. ***Conclusion*:** In our study, it is observed that in patients with pre-existing heart disease were associated with small for gestational age babies. Cardiac disease complicating pregnancy is a high risk situation which needs attention and thorough work-up. Maternal and neonatal morbidity and mortality can be reduced by regular antenatal checkups and early detection of cardiac disease. Joint management by an obstetrician, cardiologist and physician with co-operation of the patient to the fullest will result in achieving optimum maternal and fetal outcome.

Keywords: Heart disease, maternal outcome, Rheumatic Heart Disease.

INTRODUCTION

Heart disease is considered as one of the most important concerns which can result in maternal mortality and morbidity in the antenatal as well as postnatal periods [1]. Heart disease complicates at least 1% of pregnancies. There are two groups of cardiac disease in women of childbearing age: Congenital and acquired heart disease. Acquired heart disease includes rheumatic heart disease (RHD), cardiomyopathies and ischemic heart disease. Cardiac disease is usually secondary to streptococcal infections. It is considered as the most common cause of heart disease complicating pregnancy. Approximately 20.5% of maternal mortality is associated with cardiac disorders [2]. Cardiac disease in a pregnancy is a high risk state which possess a significant challenge to an obstetrician. The clinical features of cardiac lesions mimic normal physiological changes in pregnancy posing a diagnostic difficulty. Cardiac disease is the third common cause of maternal death during pregnancy [3-5].

MATERIALS AND METHODS

This was a retrospective study conducted in the Department of Obstetrics and Gynecology at Rural Medical College, Loni between the period of July 2020 to November 2021. A total of 52 pregnant women with cardiac disease were admitted during the study period. Data was collected from previous hospital records.

Inclusion criteria

- All pregnant women with known pre-existing cardiac disease.

Exclusion criteria

- All pregnant women who have been diagnosed newly to have a cardiac disease.

RESULTS

A total 52 pregnant women with cardiac disease were included in the study. Total number of deliveries during this period was 13806. The incidence of cardiac disease was found to be 0.37%.

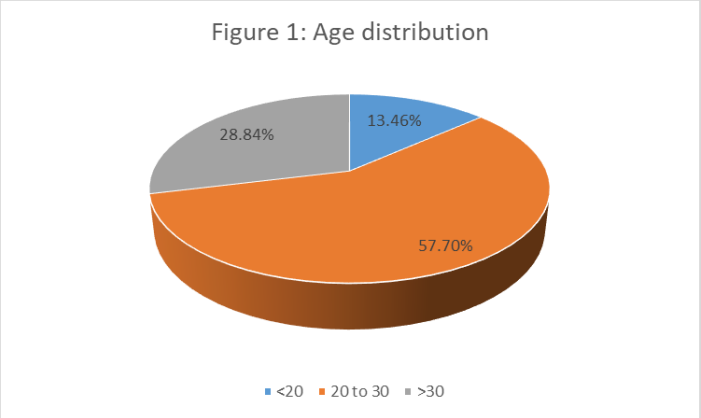

Figure 1: Distribution of patients according to Age

Table 1: Distribution of patients according to Gravida Score

Gravida	Frequency	Percentage
Primigravida	25	40.07%
G2	20	38.46%
G3 or more	7	13.46%
Total	52	100%

Table 2: Distribution of patients according to Gestational age (at the time of delivery)

Gestational age	Frequency	Percentage
28- 33 weeks	5	9.61%
34-36 weeks	7	13.46%
37-40 weeks	40	76.93%
Total	52	100%

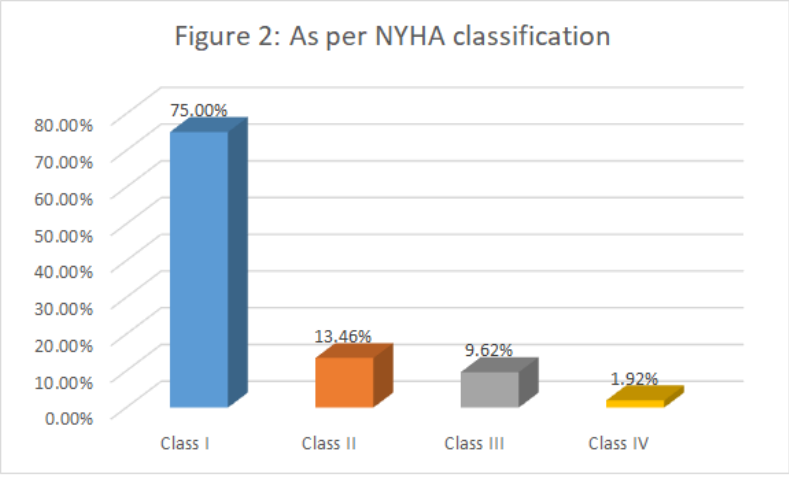

Figure 2: Distribution of patients according to NYHA classification

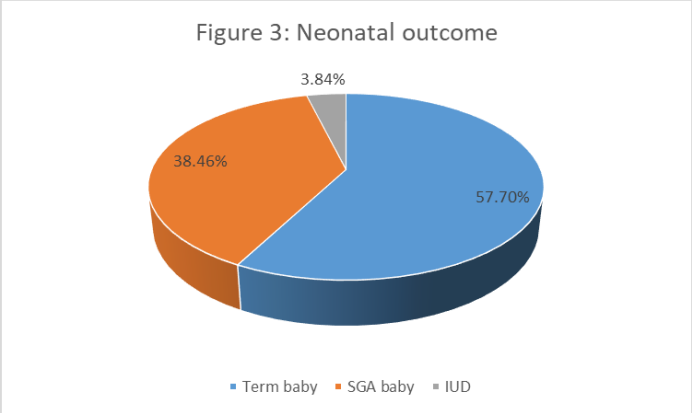

Figure 3: Distribution of patients according to neonatal outcome

Table 3: Distribution of patients according to Mode of delivery

Mode of delivery	Frequency	Percentage
FTND	20	38.46%
LSCS	30	57.70%
Forceps	1	1.92%
PTVD	1	1.92%
Total	52	100%

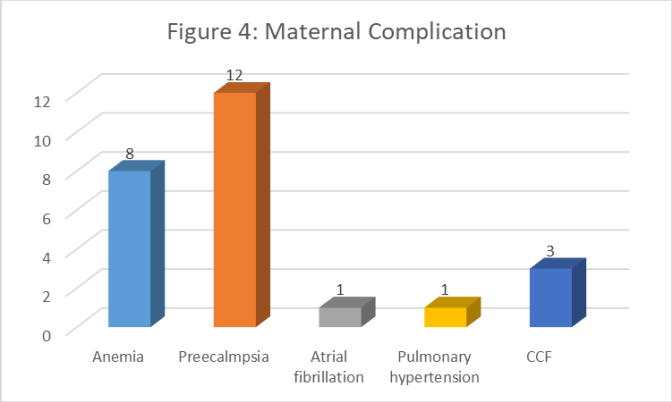

Figure 4: Distribution of patients according to Maternal Complications

Table 4: Distribution of patients according to type of heart disease and age

Age in years	RHD	CHD	Total
<20	1	1	2
20-30	30	7	37
>30	10	3	13
Total	41	11	52

DISCUSSION

This study provides an estimate of maternal and fetal health in cardiac disease patients complicating pregnancy in the setting of comprehensive antenatal care. Cardiac disease contributes to be a risk factor for maternal and neonatal morbidity and mortality. In our study, we found that majority of patients were in the age group of 20-30 years which accounted to 57.70%. Most of the patients were primigravida around 40.07% followed by primipara. It was observed that 76.93% of patients were full term that is gestation age of 37 to 40 weeks. Out of 52 pregnancies, about 75% of patients belonged to NYHA class I. Almost 57.70% babies were term babies followed by 38.46% were small for gestational age and 3.84% were intrauterine deaths. The incidence of spontaneous vaginal delivery was 40.38% and outlet forceps was 1.92% to cut short the second stage of labour. The incidence of caesarean section among the patients was 57.70%. Maternal complications associated with cardiac disease were seen in 48.07%. Among them pre-eclampsia was observed in 12 patients followed by anaemia in 8 patients. Present study showed that the predominant lesion Rheumatic Heart Disease seen in 41 patients comprising 78.84 % of patients of cardiac disease visiting our hospital.

CONCLUSION

In our study, it is observed that in patients with pre-existing heart disease were associated with small for gestational age babies. Cardiac disease complicating pregnancy is a high risk situation which needs attention and thorough work-up. Maternal and neonatal morbidity and mortality can be reduced by regular antenatal checkups and early detection of cardiac disease. Joint management by an obstetrician, cardiologist and physician with co-operation of the patient to the fullest will result in achieving optimum maternal and fetal outcome.

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