

A Study of Maternal and Fetal Outcome in Heart Disease Complicating Pregnancy in Chengalpattu Medical College and Hospital

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Abstract

BACKGROUND:

Cardiovascular diseases in women affects nearly 1% of all pregnancies. Challenges in the management has increased because successful treatment of congenital heart diseases has created a new population who are able to reach the childbearing age and pregnancy in older women who are susceptible to heart disease acquired in adulthood.

STUDY DESIGN: It is a prospective observational study.

PLACE OF STUDY: Chengalpattu medical college and hospital

METHODOLOGY: All pregnant women who were referred or attended OPD but who donot have heart disease but presenting with symptoms and signs suggestive of heart disease were subjected to meticulous history taking and detailed examination was done after getting informed consent. Cardiologist opinion was obtained for these patients and the patients were now labelled as newly diagnosed heart disease patients and were included in the study after explaining the study details.

RESULTS: Among the patients nearly, 82% patients belong to socioeconomic class IV. 97% patients were booked. Average age at pregnancy is 24years. Majority of patients were primi and second gravida. 50% patients had rheumatic heart disease. 25% patients had congenital heart disease. 19% patients had mitral valve prolapse syndrome. 3patients had cardiomyopathy. Among the rheumatic heart disease mitral valve involvement is most common. Among the congenital heart disease ASD and VSD are the most common in pregnancy women

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I. Introduction

Cardiovascular diseases in women affects nearly 1% of all pregnancies. Challenges in the management has increased because successful treatment of congenital heart diseases has created a new population who are able to reach the childbearing age and pregnancy in older women who are susceptible to heart disease acquired in adulthood. The incidence of clinically significant cardiac disease in pregnancy varies from 0.1% to 4% with average being 0.8%. Women with cardiac disease may not be able to withstand such physiological changes during pregnancy¹. Heart disease in pregnancy is a cause for concern for the obstetrician^{2,3}. Disease of the cardiovascular system head the list of causes of death in general population⁴.

In the developed countries, circulatory disorders in pregnancy have become more important as other causes of morbidity and mortality have declined due to economic prosperity, better nutrition, improved medical care and social conditions⁵.

The incidence of this serious condition is low about 1%, in the range of 0.2-4.1% as quoted from various centres⁶.

There are different criteria used for diagnosis which also change with time due to new investigation techniques³.

The most dominant of rheumatic heart lesions has been mitral stenosis (upto 80%) followed by aortic stenosis (10%), mitral regurgitation (6.6%) and aortic regurgitation (2.5%)⁷.

The improvements in cardiovascular surgery has improved the prognosis of congenital lesions and many women, even with severe defects are reaching the childbearing age⁸.

The ischemic heart disease in pregnancy is approximately 1 per 10000 deliveries and acute myocardial infarction is 7.5 per 10000 deliveries⁹.

Natural history of the underling cardiovascular disease and the circulatory changes peculiar to pregnancy are important considerations in the management⁸.

II. Aims And Objective

1. To study the incidence of patients with congenital and acquired heart disease complicating pregnancy.
2. To study the outcome of pregnancy in patients with heart disease complicating pregnancy
3. To study the prevalence of antepartum, intrapartum and postpartum complications in patients with heart disease complicating pregnancy.
4. To analyze the impacts of heart disease on pregnancy.
5. To analyze the impacts of pregnancy on heart disease.

III. Materials And Methods

My dissertation topic was study on fetomaternal outcome in heart disease complicating pregnancy at Chengalpattu medical college and hospital during the study period January 2018 to January 2019 for 12months including 100 pregnant women with heart disease complicating pregnancy.

IV. Methodology

- (i) Meticulous proper history taking including previous significant history of Rheumatic Fever
- (ii) History of decompensation in preceding pregnancies or present pregnancy
- (iii) Details of the heart disease
- (iv) Details of medical and surgical treatment of Heart Disease formerly
- (v) A methodical clinical examination
- (vi) Required investigations
- (vii) Providing appropriate treatment

All pregnant women who were referred or attended OPD but who donot have heart disease but presenting with symptoms and signs suggestive of heart disease were subjected to meticulous history taking and detailed examination was done after getting informed consent.

Cardiologist opinion was obtained for these patients and the patients were now labelled as newly diagnosed heart disease patients and were included in the study after explaining the study details.

Echocardiogram was highly beneficial in diagnosing an organic lesion of the heart in many patients and hereby helps in early detection and management of complications.

INCLUSION CRITERIA

All pregnant women with various Heart Disease (Rheumatic, Congenital, Valvular, Ischemic, surgically corrected etc..) who were admitted in Chengalpattu medical college and hospital for safe confinement and also who seek MTP, MTP with sterilization and interval sterilization.

EXCLUSION CRITERIA

All pregnant heart disease patients who have got admitted in hospital with other medical disorders of pregnancy like diabetes complicating, hypertensive disorders of pregnancy, anemia complicating pregnancy, liver disorders complicating pregnancy, multiple pregnancy, vesicular mole etc.

V. Results

The total number of patients included in the study was 100 out of which 95 were delivered, 4 underwnt MTP and one patient came for interval sterilization.

TABLE1:

TOTAL NO DELIVERIES	TOTAL HEART DISEASE DELIVERIES	INCIDENCE
1165	100	0.08%

TABLE 2: DISTRIBUTION OF CASES AS PURPOSE OF ADMISSION:

PURPOSE OF ADMISSION	NO OF PATIENTS
DELIVERY	95
MTP WITH STERILIZATION	4
INTERVAL STERILIZATION	1

BOOKED STATUS:

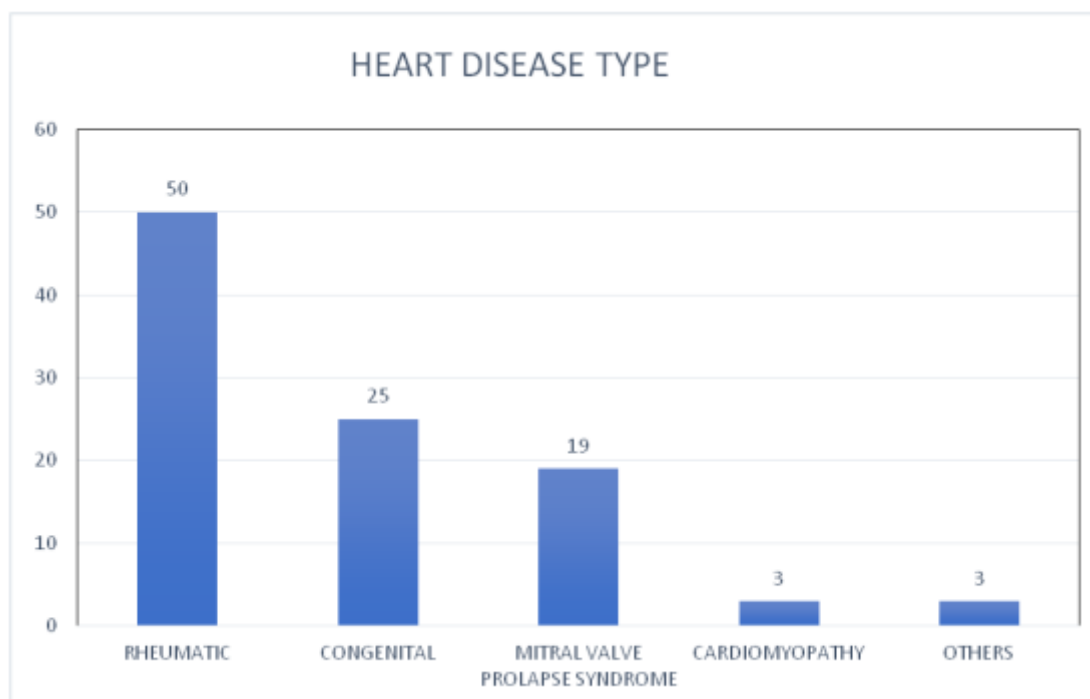
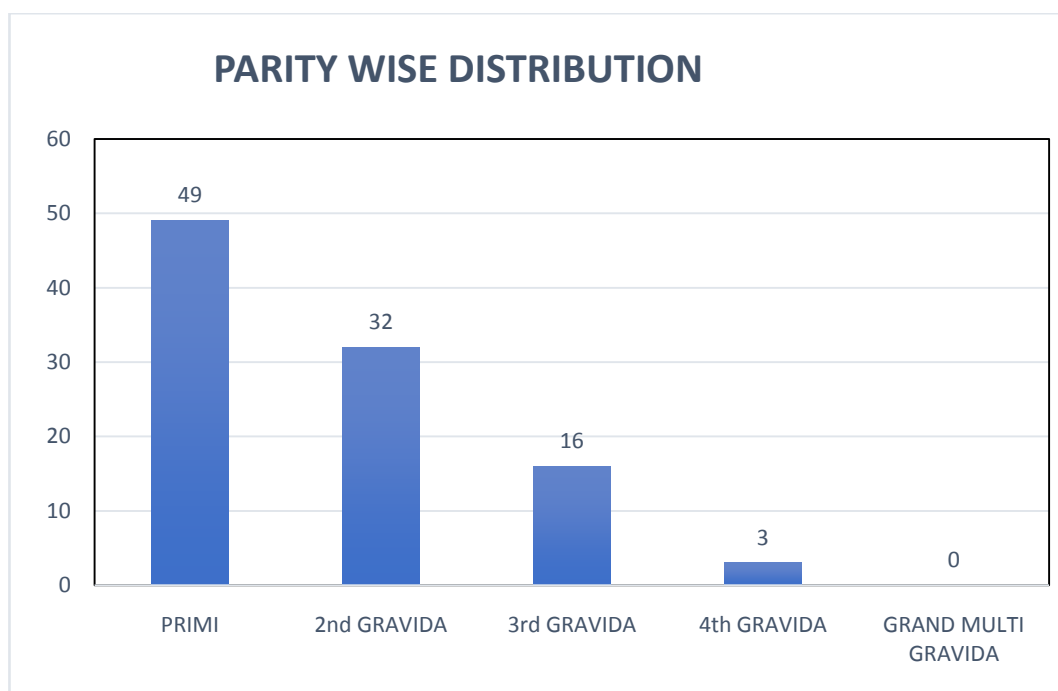
TABLE 3:

BOOKED STATUS	TOATL NO OF PATIENTS
BOOKED	97
UNBOOKED	3

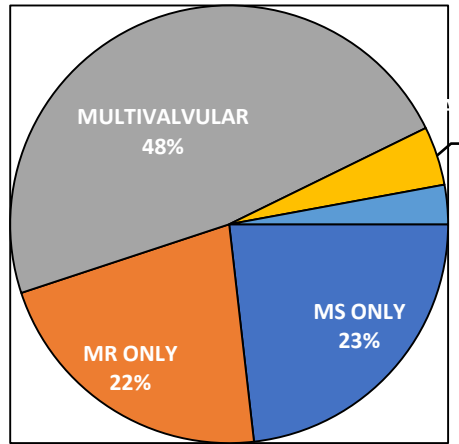
AGE DISTRIBUTION:

TABLE 4:

AGE	NO OF PATIENTS
<19	0
20-24	55
25-29	33
30-34	11
>35	1

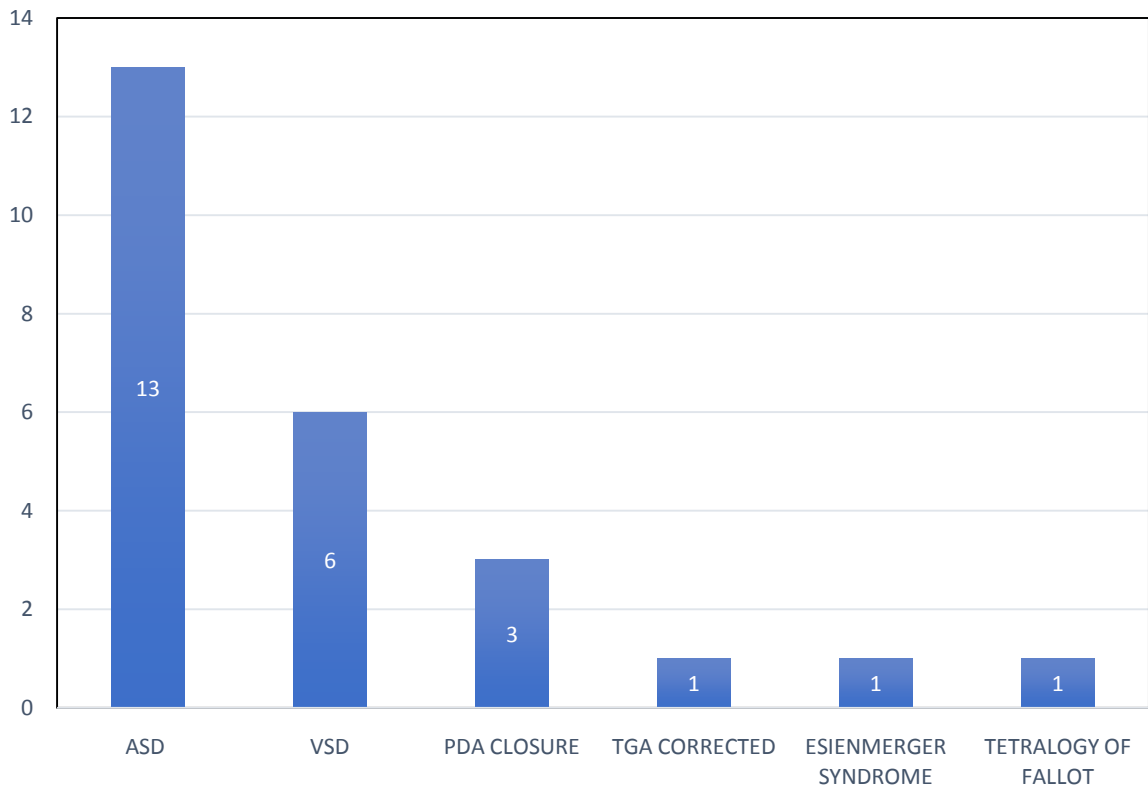


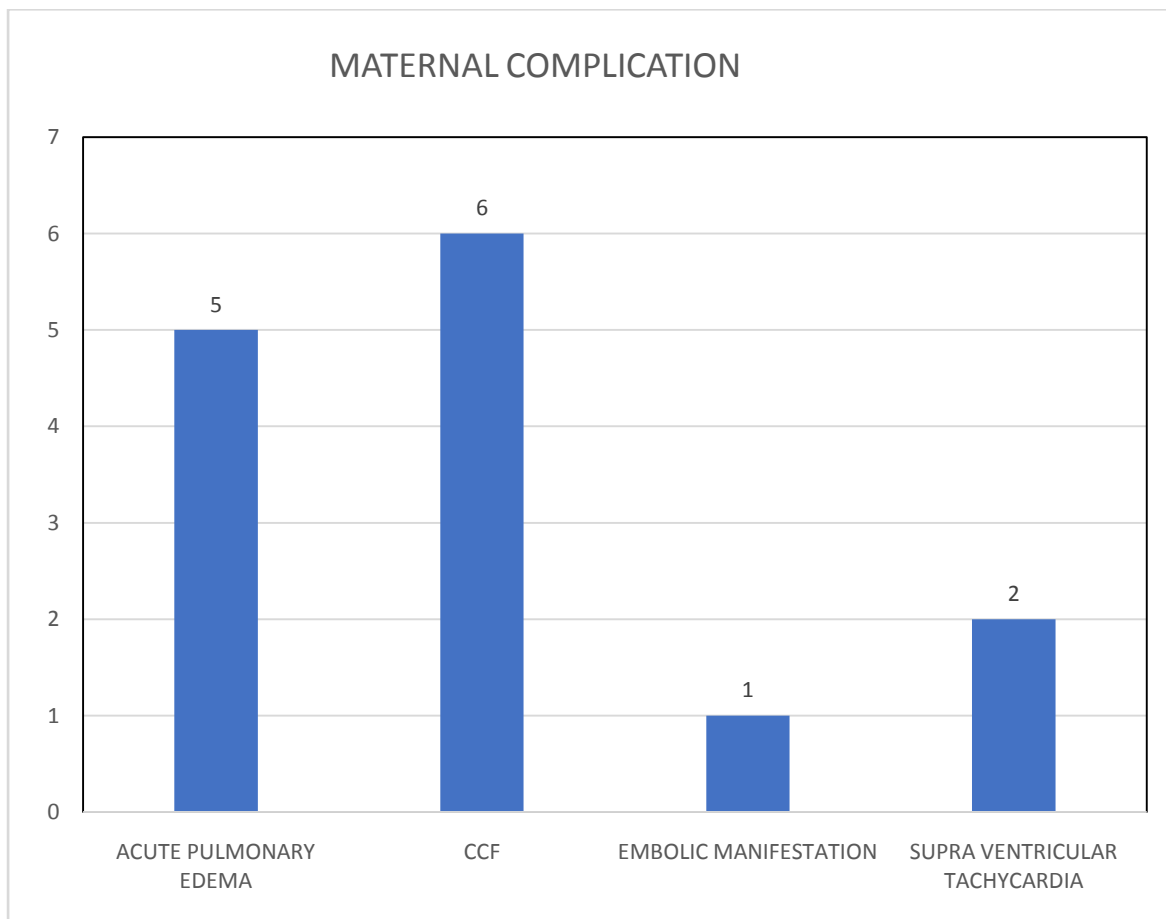
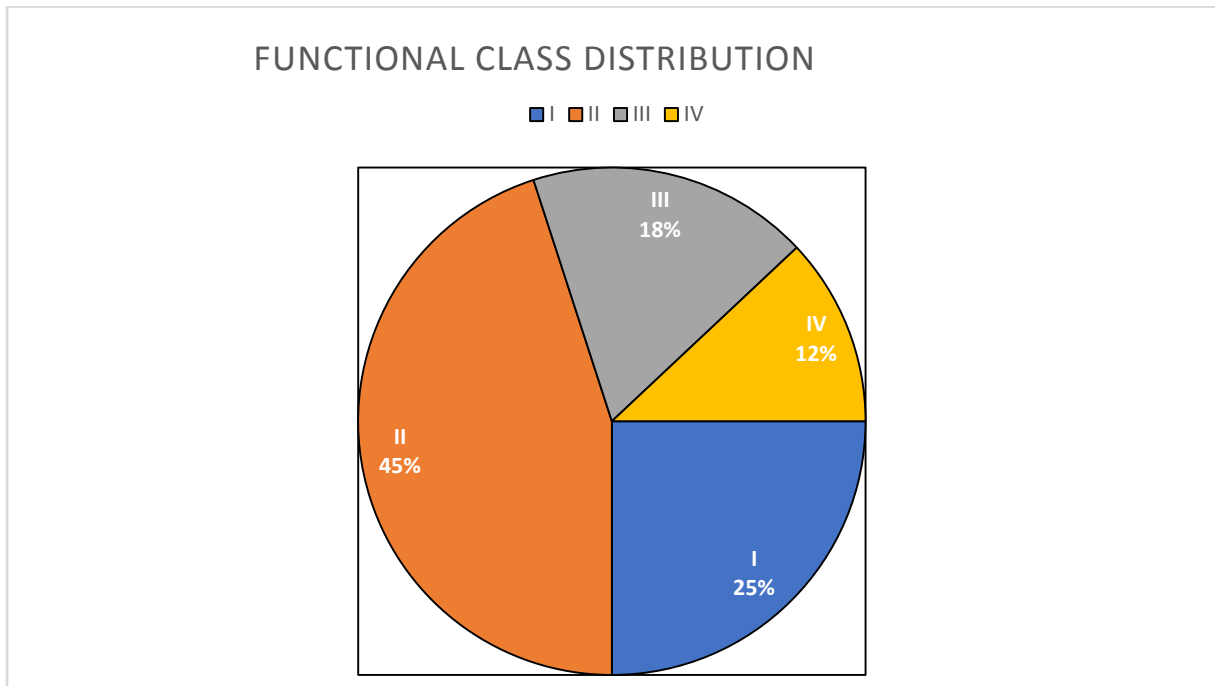
VALVE LESION



■ MS ONLY ■ MR ONLY ■ MULTIVALVULAR ■ AS ONLY ■ AR ONLY

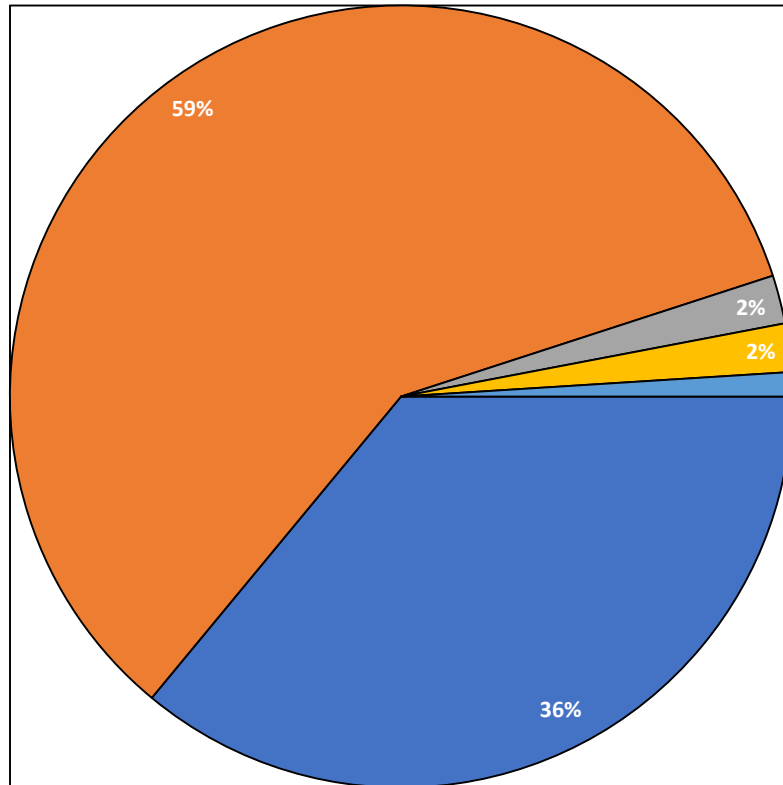
TYPES OF CONGENITAL HEART DISEASE



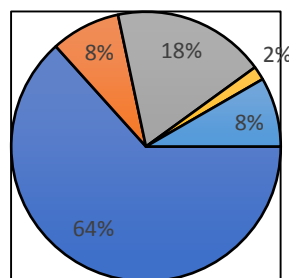


OUTCOME OF PREGNANCY

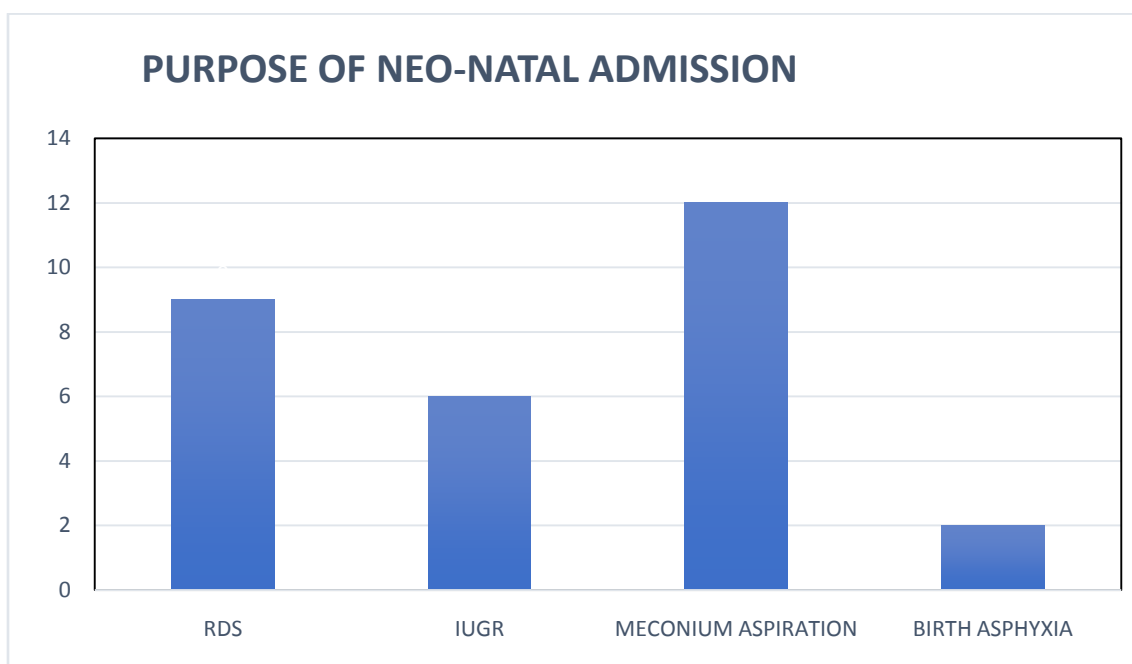
■ VAGINAL DELIVERY ■ CAESEREAN SECTION ■ MVA ■ MVA & STERILIZATION ■ INTERVAL STERILIZATION



INDICATION FOR CAESAREAN SECTION



■ CPD ■ BREECH/FPD
■ FETAL DISTRESS ■ SEVERE OLIGOHYDRAMINOS
■ OBLIQUE LIE



Cardiovascular diseases in women affect nearly 1% of all pregnancies. Among the patients nearly, 82% patients belong to socioeconomic class IV. 97% patients were booked. Average age at pregnancy is 24years. Majority of patients were primi and second gravida. 50% patients had rheumatic heart disease. 25% patients had congenital heart disease. 19% patients had mitral valve prolapse syndrome. 3patients had cardiomyopathy. Among the rheumatic heart disease mitral valve involvement is most common. Among the congenital heart disease ASD and VSD are the most common in pregnancy women. During my one year study period one patient with tetralogy of Fallot at the age of 23, a primigravida was included in my study. From my study majority of pregnant mothers with heart disease complicating pregnancy had no specific complaints during their antenatal visits, hence all antenatal patients at any gestational age should undergo screening ECHO for early diagnosis of heart disease.

Bibliography

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