



HEART DISEASE DURING PREGNANCY



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OUTLINES



1. Introduction.
2. Definition of heart diseases.
3. Normal Physiologic Changes During Pregnancy.
4. Signs and symptoms of heart disease during pregnancy.
5. Acquired Cardiovascular Disorders During Pregnancy.
6. Complication.
7. Diagnosis of heart disease during pregnancy.
8. Health Education.
9. Interventions in the mother during pregnancy.



INTRODUCTION



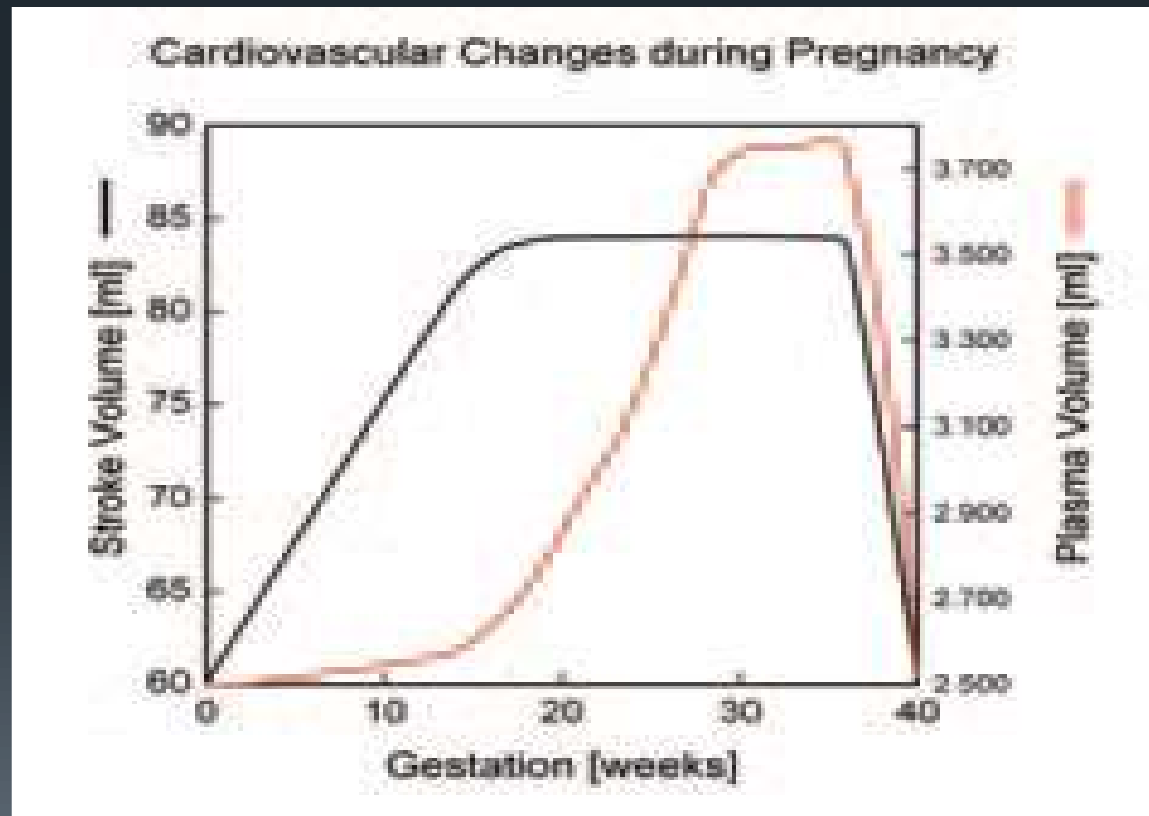
Cardiac diseases complicate 1% to 4% of pregnancies in women without preexisting cardiac abnormalities. A working knowledge of the normal physiology of pregnancy is often helpful in the management of patients with heart disease. Patients with preexisting cardiac lesions should be counseled in advance about the risk of pregnancy.

DEFINITION OF HEART DISEASE

Any disorder
that affects the
heart



NORMAL PHYSIOLOGIC CHANGES DURING PREGNANCY



NORMAL HEMODYNAMIC CHANGES DURING PREGNANCY

Hemodynamic Parameter	Change During Normal Pregnancy	Change During Labor and Delivery	Change During Postpartum
Blood volume	↑ 40%-50%	↑	↓ (autodiuresis)
Heart rate	↑ 10-15 beats/min	↑	↓
Cardiac output	↑ 30%-50%	↑ Additional 50%	↓
Blood pressure	↓ 10mmHg	↑	↓
Stroke volume	↑ First and second trimesters; ↓ third trimester	↑ (300-500mL per contraction)	↓
Systemic vascular resistance	↓	↑	↓

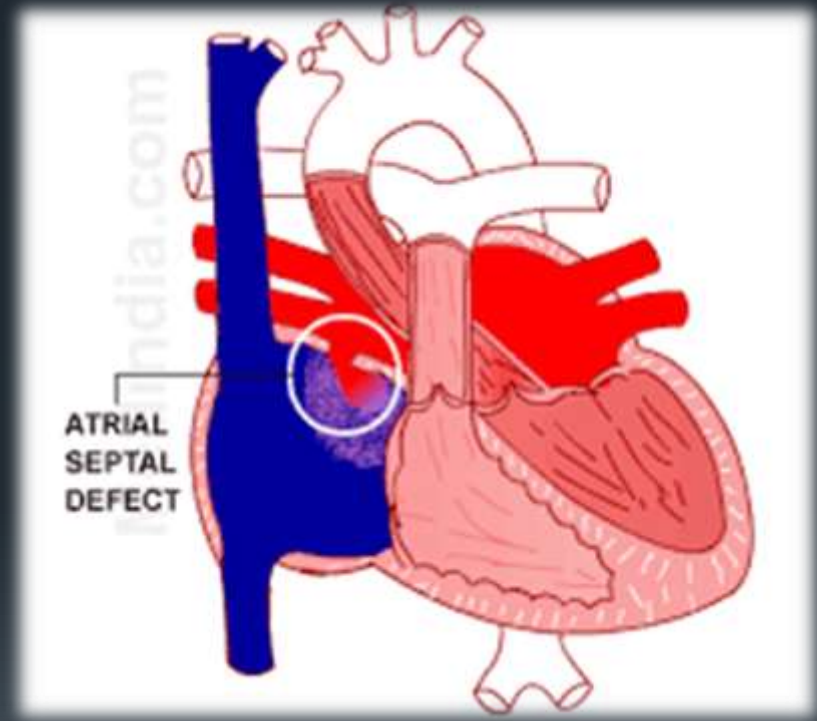
SIGNS AND SYMPTOMS OF HEART DISEASE DURING PREGNANCY

- Fainting.
- Extreme fatigue .
- Shortness of breathing .
- Chest pain or fast heart rate .-
- Persistent cough .
- Extreme swelling and weight gain .



RISK FACTORS: LOW RISK

- Atrial septal defect.
- Ventricular septal defect.
- Patent ducts arteriosus.
- Repaired cyanotic congenital heart disease without residual cardiac dysfunction



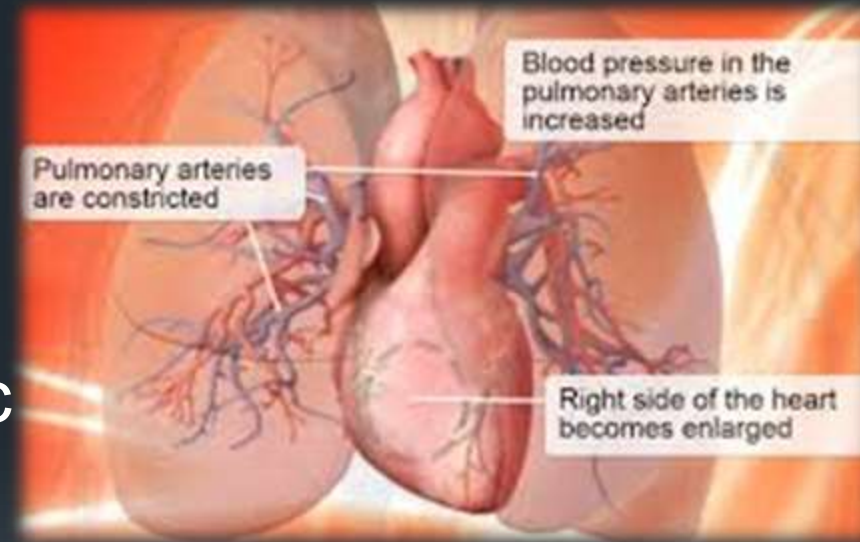
RISK FACTORS: INTERMEDIATE

- Large left to right shunt.
- Large left to right shunt.
- Marfan syndrome with a normal aortic root.



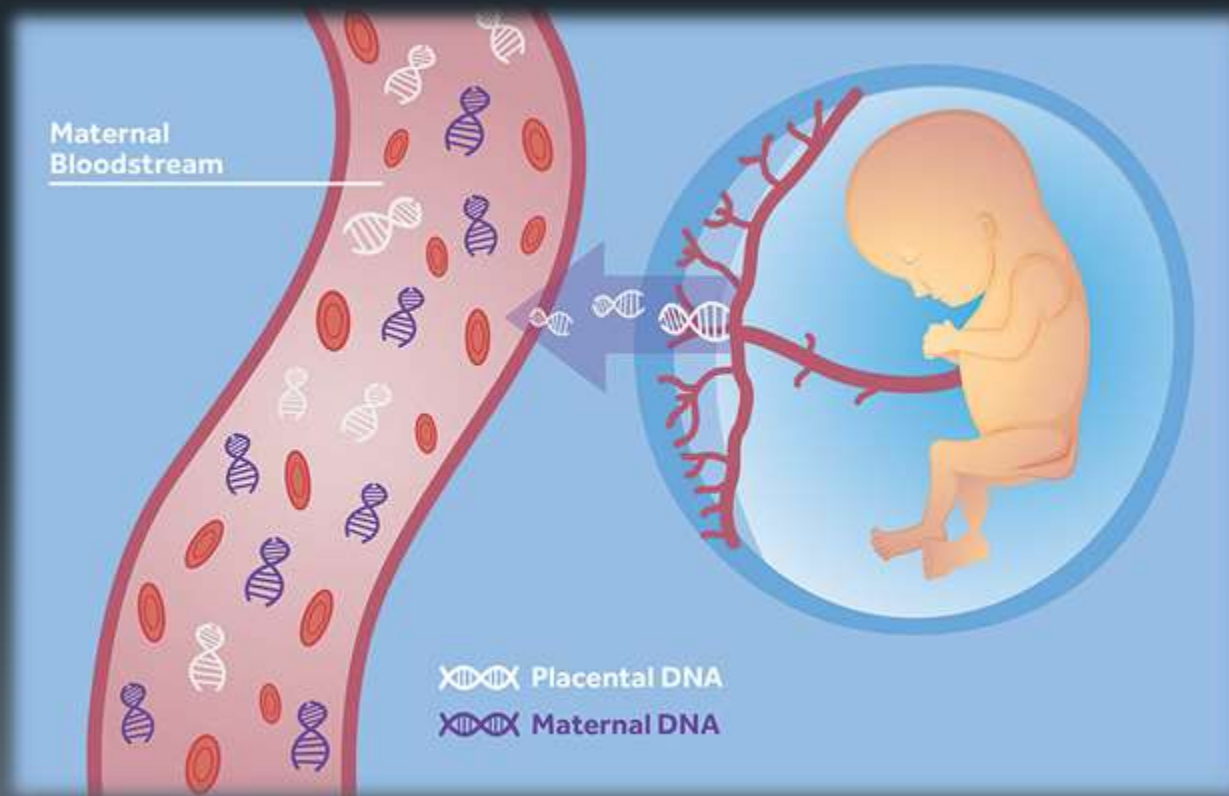
RISK FACTORS: HIGH RISK

- Severe pulmonary hypertension.
- Complex cyanotic heart disease (TOF, Epstein's anomaly, TA, TGA, tricuspid atresia).
- Marfan syndrome with aortic root or valve involvement .
- Severe AS with or without symptoms.
- Aortic or mitral valve disease, or both.



ACQUIRED CARDIOVASCULAR DISORDERS DURING PREGNANCY

Maternal Placental Syndromes



ACQUIRED CARDIOVASCULAR DISORDERS DURING PREGNANCY

Hypertension in Pregnancy



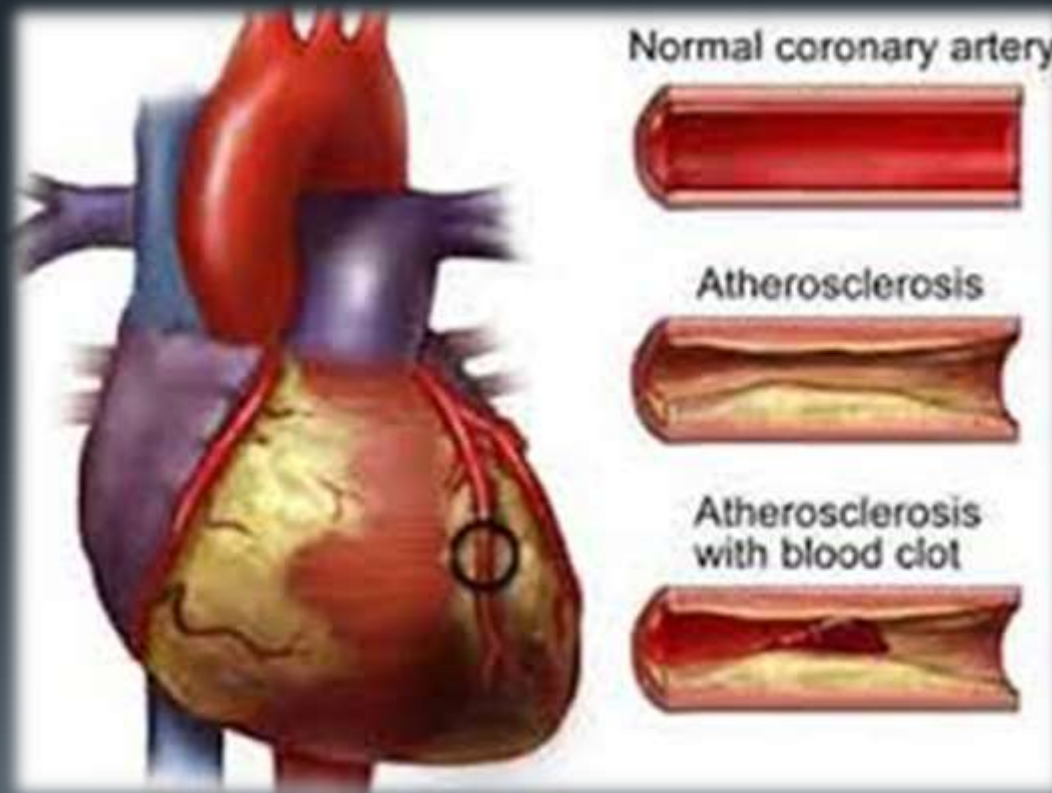
ACQUIRED CARDIOVASCULAR DISORDERS DURING PREGNANCY

Per partum Cardiomyopathy



ACQUIRED CARDIOVASCULAR DISORDERS DURING PREGNANCY

Coronary Artery Disease



ACQUIRED CARDIOVASCULAR DISORDERS DURING PREGNANCY

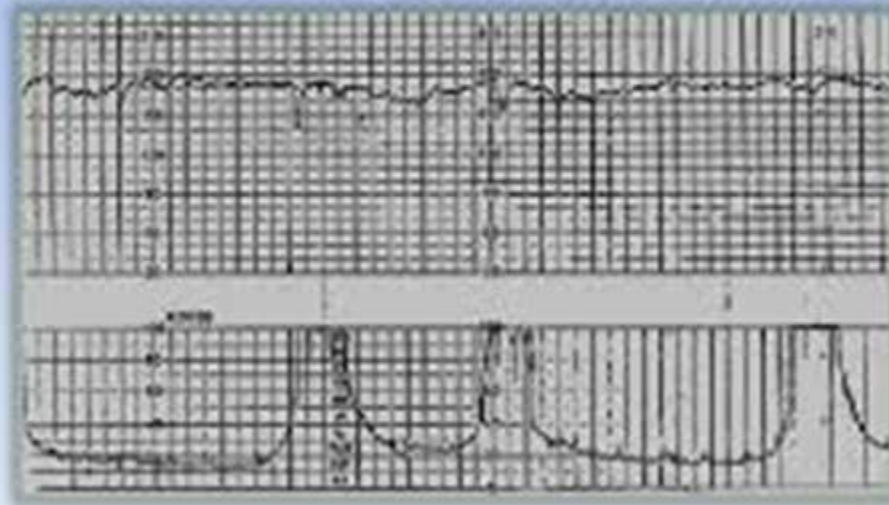
Arrhythmias in Pregnancy



ACQUIRED CARDIOVASCULAR DISORDERS DURING PREGNANCY

Fetal Tachycardia

FETAL TACHYCARDIA



Fetal tachycardia with possible onset of decreased variability during the second stage of labor. Fetal heart rate is 170 to 180 bpm. Mid variable decelerations are present.

COMPLICATIONS

* Obstetric Complications

- Pre-term delivery .
- postpartum hemorrhage.
- polyhydraminos .

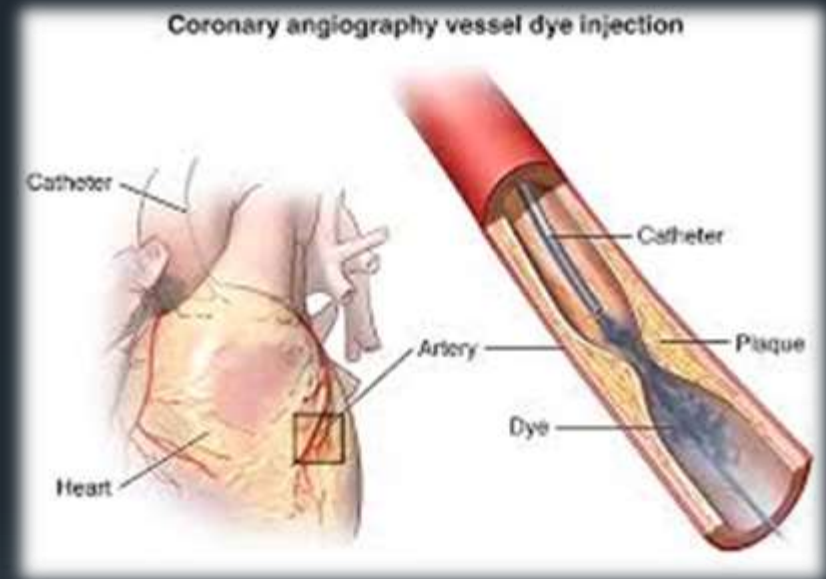
* Fetal & Neonatal Outcomes

- spontaneous miscarriage and therapeutic abortion .
- neonatal death .
- fetal growth restriction .
- preterm delivery.



DIAGNOSIS OF HEART DISEASE DURING PREGNANCY

- History
- clinical investigation
- Electrocardiography
- Echocardiography
- Exercise testing
- Radiation exposure
- Chest radiograph
- MRI and CT
- Cardiac catheterization



HEALTH EDUCATION



INTERVENTIONS IN THE MOTHER DURING PREGNANCY

- Timing and mode of delivery
- Labor induction
- Vaginal or caesarean delivery
- Hemodynamic monitoring
- Labor
- Post-partum care
- Breast feeding



Thank
You!

