

STANDARD OPERATING PROCEDURE

Heart Disease in Pregnancy

Special Region (1)

Union of Myanmar

Version: (1)

Effective Date: 24 May 2026

Review Date: 24 May 2027

Approved by: Internal Medicine Unit

Heart Disease in Pregnancy

1.Types of Heart disease in pregnancy

- Rheumatic heart disease
- Congenital heart disease
- Bacterial endocarditis
- Cardiomyopathy of Pregnancy
- Cardiac arrhythmia
- Ischaemic heart disease

Whatever the underlying cause of cardiac insufficiency, the ability to tolerate pregnancy is related to the following:

- Presence of pulmonary hypertension
- Haemodynamic significance of any lesion
- Functional class (New York Heart Association, NYHA)
- Presence of cyanosis (arterial oxygen saturation <80%)
- History of transient ischaemic attacks or arrhythmias
- History of heart failure
- Left heart obstruction (mitral valve area <2cm², aortic valve area <1.5 cm², aortic valve

gradient [mean non-pregnant] >30 mm Hg)

- Myocardial dysfunction (left ventricular ejection fraction [LVEF] <40%)

NYHA Classification Class I - No breathlessness, uncompromised Class II - Breathlessness on severe exertion/slightly compromised Class III - Breathlessness on mild exertion/moderately compromised Class IV - Breathless on rest/severely compromised 2.Pre-pregnancy counselling Detailed assessment of cardiac status, and any potential risk of mother and fetus should be explained before conception. These individuals should be fully assessed by an MDT, including an obstetrician and cardiologist. 3.Antenatal management of pregnant women with heart disease

- MDT approach by a cardiologist, obstetrician, anaesthetist and neonatologist.
- Advise to book for AN care as early as possible.
- Detailed booking history on past medical history and drug history.
- Has she been taking medication regularly?

- When was her last visit seeing cardiologist / physician?

➤ Assess cardiac status according to NYHA Classification. ➤ Review all available documents including investigation results / Physician's note.

- Arrange to have joint care with cardiologist throughout the pregnancy.
- Prescribe iron and vitamin supplementation and encourage to take regularly since anaemia can precipitate the heart failure

- Advise to take adequate rest, to have balance diet and to avoid risk behavior which can precipitate the heart condition such as smoking, going to crowded area etc

- Treat dental sepsis effectively (if present)
- AN care visit schedule should be in accordance with patient's condition rather than routine schedule (may need more frequent visit)

- Arrange to have serial growth scan after 28 weeks particularly in women with clinical findings suggestive of small for date baby

- Arrange pediatrics visit for counseling regarding possibility of congenital heart in her baby if mother has congenital heart disease

- Consider hospital admission if any symptoms develop or any deterioration
- Advise admission for antenatal rest if she has NYHA class III and IV
- Counseling regarding sterilization based on medical ground and / or obstetric indication

Planning of delivery

- Most women with cardiac disease are able to and should be encouraged to have normal vaginal deliveries.

- Each case should be assessed individually taking into account past medical and obstetric history.

- A multidisciplinary plan should be developed and documented by the obstetrician, cardiologist and anaesthetist with expertise in the management of heart disease in pregnancy together with the patient.

- Await for spontaneous onset of labour (rather than induction).
- Consider caesarean section if obstetric indication present.

4. Intrapartum management of pregnant women with heart disease Management of First stage

- Enquire about duration of labour pain, duration of membranes rupture, symptoms suggestive
- of heart failure and acute pulmonary oedema such as dyspnoea, orthopnoea, palpitation,

tightness of chest, cough, haemoptysis etc.

- Perform thorough systemic and obstetric examination
- Contact Physician / Cardiologist for intrapartum review
- Keep necessary emergency drugs like injection frusemide, aminophylline etc in hand
- Consult with anaesthetist to provide adequate pain relief (continuous epidural is preferred

provided facilities are available)

- Keep the patient in propped up position
- O₂ inhalation (monitored with pulse oxymeter if facility present)
- Advise to take only liquid and light diet
- Partograph to monitor the progress of labour
- Prescribe antibiotic prophylaxis if the patient is high risk for developing infective endocarditis
- Avoid augmentation with oxytocin (if possible) since there is a risk of acute pulmonary
- edema
- If augmentation is necessary, use concentrated regime (e.g., oxytocin 2 units in 250 ml of

Normal Saline) Antibiotic prophylaxis regimen (According to American Heart Association Guideline)

- Ampicillin 2.0 gram IV (or IM) plus gentamicin 1.5 mg/kg IV (or IM) (not to exceed 80 mg) 30 minutes before the procedure or at the onset of labour followed by amoxicillin 1.5 gm orally 6 hours after the initial dose. Management of second and third stage

- Closely monitor the vital signs and watch for signs and symptoms of heart failure and pulmonary oedema

- Prophylactic instrumental delivery to avoid prolonged second stage to reduce maternal straining

- if emergency caesarean section is necessary for obstetric indication, involve consultant anaesthetist and take risk consent from patient and relatives after proper counseling

- Avoid ergometrine in third stage - danger of vasoconstriction and heart failure

5. Postpartum management

- Post natal follow up

- Postnatal check by obstetrician
- Contraception

. IUCD is contraindicated for Valvular heart disease . low dose COC and barrier methods can be used . Progesterone injection, progestogen only pills, implants can be given . Sterilization

- Refer back to cardiologist
-

References

1. Obstetrics and Gynaecology Myanmar management guidelines, 2024
2. Handbook of Obstetric Medicine, Catherine Nelson-Piercy, 5th Edition
3. Obstetrics and Gynaecology An Evidence-based Textbook for MRCOG