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BEST PRACTICES IN NURSING CARE OF A PATIENT WITH AMI

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Outline

1. Introduction
2. Core principles in Nursing care for a patient with AMI
3. Best practices in Nursing care in AMI
4. Pre & Postoperative Nursing care
5. Nursing management of AMI
6. Patient education at discharge

Introduction

Acute Myocardial infarction(AMI) a.k.a “a heart attack” is a life-threatening coronary pathology that can lead to sudden death(American Heart Association, 2025).

Rapid stabilization to ensure timely reperfusion therapy without any delay is very crucial. “TIME IS MUSCLE” (WHO, 2023).

A knowledgeable nurse recognizes AMI symptoms early and activates the rapid response team that eventually saves that myocardium.

Six core principles in Nursing care

Time is muscle

Early recognition and reperfusion save the myocardium and lives. “CALL FOR HELP”

Continuous Patient monitoring

Trend rhythm, vitals and pain; escalate early, Have the crash cart ready

Medication safety

Verify allergies and contraindications; second-check high-alert drugs

Complications prevention

Anticipate arrhythmia, bleeding, heart failure, VTE

Holistic nursing care

Address pain, fear, knowledge deficiency about the condition and involve the family

Patient Education

Use teach-back and start secondary prevention early for modifiable risk factors

Best practices in nursing care

1	**Receive patient from EMS**	Identify patient, connect the patient to the cardiac monitor, position in a semi-fowler, receive report, do baseline vitals, **"Call for Help",** obtain blood samples[cardiac markers, CBC, RFTs, LFTs, lipid profile, CRP, PCT, serology, blood group, establish a large bore iv access
2	**MONAC**	Morphine, Oxygen, nitroglycerin puffs/sublingual, Aspirin 300 mg, Clopidogrel 300mg[onset 2-6hr] or Ticagrelor 180mg[onset 30mins-2hours] and LMWH. Administer as per Dr's order and document
3	**12-lead ECG**	Within 10 min of first medical contact
4	**Activate reperfusion pathway**	Cathlab notified for urgent CAG+/-PCI, if PCI[the gold standard] is not possible within 120mins, fibrinolysis is considered e.g iv tenecteplase(a 2-nurses procedure)
5	**Pre-Operative care**	Informed consent, anesthesia review, site preparation, labs done especially RFTs, an ECHO, ECG & XRAY in the file, any known Allergy, book blood, remove any jewelries, gown donning, health education

Medication safety checks

Aspirin, Ticagrelor

Check allergy and bleeding risk; give loading doses on time and record the time

Anticoagulants

Verify weight-based dose and pump rate with a second nurse

Fibrinolytics

Monitor for bleeding, reperfusion arrhythmias and changes in levels of consciousness

NTG

Need SBP >90, recycle BP after dosing and every after 15mins

Opioids

Administer as prescribed, monitor RR, SPO2, sedation, and BP

Beta-blocker, ACEi

Hold for shock, heart failure, bradycardia, AV block or low BP; check K^+ and creatinine

Post-Operative care

- Receive patient report about intraoperative events
- Connect patient on a cardiac monitor and record baseline vitals
- Monitor vitals, RBS and arrhythmias
- Monitor for bleeding at the access time
- Sheath removal if ACT <180s
- If post-lytic, monitor for neurological deficits & bleeding
- Patient education on restricted movements of limb used for access

Assessment	Nursing Diagnosis	Goal/Desired Outcome	Intervention	Rationale	Evaluation
Biodata: JJ, a 56yr/M **S:**Pressing chest pain radiating to left neck & jaw Shortness of breath **O:**Diaphoretic, BP: 179/103, tachycardia-112, SPO2-98%, RR-20, clutching his chest, pain rated 9/10 on a pain scale of 0-10	Acute Pain RT myocardial ischaemia AEB patient severe chest pain rated 9/10	Patient shall report pain relief rated 0-2 within 30minutes of nursing interventions	Assess pain every 5-15mins Do a 12-lead ECG within 10mins Administer NTG/ and Morphine Position in semi-fowler's Continuous monitoring Breathing techniques	To identify severity and response ECG confirms the type of MI Morphine+NTG reduce pain & preload To optimize breathing/reduce myocardial O2 demand For early detection of deterioration Guided breathing activates the parasympathetic decreasing muscular tension and HR	Patient reported no pain relief after 30mins of nursing intervention

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Assessment	Nursing Diagnosis	Goal/Desired Outcome	Intervention	Rationale	Evaluation
S:SOB, pressing chest pain that radiates to the left neck and jaw O: Alert, PERRL BP:179/103 HR-112, ECG T-wave inversions, 2+peripheral pulses & warm, Temp-37.1, no LE edema WBC 11 x 10^3/µL HGB 13 g/dL Troponin I: 1.8 ng/mL BNP: 230 pg/mL	Decreased cardiac tissue perfusion RT to coronary artery occlusion AEB T-wave inversions in left lateral leads on ECG, severe chest pain and raised troponins	Patient will attain and maintain HR ranges of 60-100b/m and a BP ≤ 140/90 within 6hours of nursing interventions Patient will be prepared for urgent CAG+/-PCI in 10min after Cathlab activation	Monitor vitals q15minutes Administer po aspirin, ticagrelor, sc lmwh Trend the 12-lead ECG q3hr Administer prescribed po beta-blockers Administer NTG and Anti-HTN **Prepared patient for urgent CAG**	Early detection of shock & arrhythmias To prevent clot expansion and formation To detect evolving ischaemia, T-wave changes, arrhythmias Reduces HR and contractility reducing O2 demand Dilate coronaries,↓BP and afterload To restore coronary blood flow	Patient attained a HR-80b/m and a BP-90/42 after 6hours of interventions Patient done a CAG+PCI

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Assessment	Nursing Diagnosis	Goal/Desired Outcome	Intervention	Rationale	Evaluation
S: “Am I having a heart attack” restlessness, fear O:Tachycardia-112b/m, facial tension, repeatedly calling the nurse	Anxiety RT perceived threat to health AEB patient’s facial tension	Patient will verbalize reduced anxiety, appear calm within 2hours of nursing interventions	Provide calm, reassuring presence Explain all procedures in simple language Allow short organized family visits Teach the patient deep slow breaths	To reduce sympathetic stimulation Information reduces fear of the unknown Provides family support & reassurance Promotes relaxation	Patient is less restless wihin 2hours of nursing interventions

Assessment	Nursing Diagnosis	Goal/Desired Outcome	Intervention	Rationale	Evaluation
S:"what is a heart attack?", "what caused this?", "why am I taking these drugs, why are you taking all those blood sample?". **O**:Asking many questions, smokes ½ pack per day, alcoholic, hx of heart attack, father died suddenly at age 54	Deficient knowledge RT unfamiliarity with secondary prevention AEB continued high risk behaviors	Patient will be able to state causes of AMI, risk factors, warning signs, RX options available and life style changes within 1day Patient will demonstrate medication adherence before discharge	Assess baseline knowledge Teach in short sessions post-pain Explain: AMI causes, importance of DAPT/statin & CAG+PCI/ lytic **Involve the nutritionist** **Lifestyle**; stop smoking/alcohol, exercise,wt control **Warning signs and teach back**	**To identify** knowledge gaps **Short sessions** improve retention **Understanding promotes drug adherence** and prevents frequent readmissions **To provide targeted dietary** modifications **To initiate secondary prevention** Teach-back confirms comprehension	Patient correctly listed 3 risk factors, 2 warning signs, purpose of drugs and willingness to start physical exercise and stop alcohol within the 12hours day shift

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Patient education at discharge

- Drug adherence; DAPT, statins, B-blockers, ACEI, avoid NSAIDS
- Lifestyle modification
- Inform any Dr about the stent and DAPT before any procedure
- Avoid strenuous activities of the limb used for access
- Danger signs e.g chest pain, bleeding at access site, Stroke signs
- Adhere to follow-up schedules

Key take-aways

1. Recognise early, including atypical presentations
2. ECG within 10 minutes; activate the reperfusion pathway
3. Stabilize: antiplatelets, anticoagulant, pain control, monitoring
4. Watch for arrhythmia, shock, heart failure and bleeding
5. Teach for secondary prevention before discharge

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Thank you


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