



Department of Anesthesia Techniques



Recognition and
management of critically
ill patient.

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Triage for Critical Care Units

- a) **Identification of Patients:** The patients who require critical care unit intervention should be identified according to the diagnosis.
- b) **Assessment of Severity:**
- c) **Prioritization of the Patient**

Assessment of Severity

1-Vital Signs

2-Laboratory Values Radiography/Ultrasonography/CT

3- Physical Findings

ADMISSION CRITERIA

- The Intensive Care Unit is an expensive resource area and should be reserved for patients with reversible medical conditions with a prospect of recovery.

A. Respiratory

1. **Acute respiratory failure** requiring ventilatory support
2. **Acute pulmonary embolism** with hemodynamic instability
3. **Massive haemoptysis**
4. **Upper airway obstruction**

B. Cardiovascular

1. Shock states
2. Life-threatening dysrhythmias
3. Dissecting aortic aneurysms
4. Hypertensive emergencies
5. Need for continuous invasive monitoring of cardiovascular system(arterial pressure, central venous pressure, cardiac output)

C. Neurological

1. Severe head trauma
2. Status epilepticus
3. Meningitis with altered mental status or respiratory compromise
4. Acutely altered consciousness with the potential for airway compromise
5. Progressive neuromuscular dysfunction requiring respiratory support and / or cardiovascular monitoring (myasthenia gravis, Gullain-Barre syndrome)
6. Brain dead or potentially brain dead patients who are being for organ donation status

Medical uses of ECG

- Suspected myocardial infarction (heart attack)
- Suspected pulmonary embolism
- A third heart sound, fourth heart sound, a cardiac murmur or other findings to suggest structural heart disease
- cardiac dysrhythmias
- Fainting or collapse
- Seizures
- Monitoring the effects of a heart medication (e.g. drug-induced QT prolongation)
- Assessing severity of electrolyte abnormalities, such as hyperkalemia
- Hypertrophic cardiomyopathy screening in adolescents as part of a sports physical out of concern for sudden cardiac death

Medical uses of ECG

- pre-operative assessment
- Cardiac stress testing
- Computed tomography angiography (CTA) and Magnetic resonance angiography (MRA) of the heart

D. Renal

1. Requirement for acute renal replacement therapies in an unstable patient
2. Acute rhabdomyolysis with renal insufficiency

E. Endocrine

- 1. Diabetic ketoacidosis complicated by haemodynamic instability**
- 2. Severe metabolic acidotic states**
- 3. Thyroid storm or myxedema coma with haemodynamic instability**
- 4. Adrenal crises with haemodynamic instability**
- 5. Other severe electrolyte abnormalities, such as:**
 - Hypo or hyperkalemia with dysrhythmias or muscular weakness**
 - Severe hypo or hypernatremia with seizures, altered mental status**
 - Severe hypercalcemia with altered mental status**

F. Gastrointestinal

1. Life threatening gastrointestinal bleeding
2. Acute hepatic failure leading to coma
3. Severe acute pancreatitis

G .Hematology

1. Severe coagulopathy and/or bleeding tendency
2. Severe anemia resulting in haemodynamic and/or respiratory compromise
3. Severe complications of sickle cell crisis
4. Hematological malignancies with multi-organ failure

H. Obstetric

1. Medical conditions complicating pregnancy
2. Severe pregnancy induced hypertension/eclampsia
3. Obstetric hemorrhage
4. Amniotic fluid embolism

I. Multi-system

1. Severe sepsis or septic shock
2. Multi-organ dysfunction syndrome
3. Polytrauma
4. haemorrhagic fever
5. Drug overdose with acute decompensation of major organ systems
6. Environmental injuries (lightning, near drowning, hypo / hyperthermia)
7. Severe burns

J. Surgical

- 1. High risk patients in the peri-operative period**
- 2. Post-operative patients requiring continuous haemodynamic monitoring/ ventilatory support, usually following:**
 - vascular surgery**
 - thoracic surgery**
 - airway surgery**
 - craniofacial surgery**
 - major orthopedic and spine surgery**
 - general surgery with major blood loss/ fluid shift**
 - neurosurgical procedures**

k. Drug Ingestion and Drug Overdose

1. Hemodynamically unstable drug ingestion
2. Drug ingestion with significantly altered mental status with inadequate airway protection
3. Seizures following drug ingestion .

Patients who are generally not appropriate for ICU admission

1. Irreversible brain damage
2. End stage cardiac, respiratory and liver disease with no options for transplant
3. Metastatic cancer unresponsive to chemotherapy and/or radiotherapy
4. Brain dead non-organ donors
5. Patients with non-traumatic coma leading to a persistent vegetative state

Discharge will be based on the following criteria:

1. Stable haemodynamic parameters
2. Stable respiratory status (patient extubated with stable arterial blood gases) and airway patency
3. Oxygen requirements not more than 60%
4. Intravenous inotropic/ vasopressor support and vasodilators are not needed.
5. Cardiac dysrhythmias are controlled
6. Neurologic stability with control of seizures
7. Patients who require chronic mechanical ventilation (e.g. motor neuron disease, cervical spine injuries) with any of the acute critical problems reversed or resolved
8. Patients with tracheostomies who no longer require frequent suctioning