STANDARD OPERATING PROCEDURE

Diagnosis and Management of Heat Stroke

Special Region (1)

Union of Myanmar

VERSION:1.0

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APPROVED BY:Internal Medicine Unit

1. Purpose

To provide a standardized, rapid response protocol for the recognition and management of heat stroke.

2. Definition

Heat stroke is a life-threatening condition characterized by:

- Core body temperature ≥ 40°C
- CNS dysfunction (confusion, delirium, coma, seizures)

3. Classification

Classic (Non-exertional): Environmental heat (elderly, children)

Exertional Heat Stroke: Strenuous activity (workers, soldiers)

4. Pathophysiology

- Failure of thermoregulation
- Peripheral vasodilation → hypotension
- Cytokine storm → dysregulated host response
- Multiorgan dysfunction

5. Clinical Features

- High fever ≥ 40°C
- Altered mental status
- Hot skin
- Severe: seizures, coma, shock, AKI, DIC

6. Diagnosis

Clinical: Heat exposure + Temp ≥40°C + CNS dysfunction

Investigations: CBC, creatinine, CK, LFT, coagulation, electrolytes

7. Severity

Moderate: confusion, stable vitals

Severe: shock, coma, organ failure

8. Immediate Management

- ABC stabilization
- Rapid cooling (goal <38.5°C in 30–60 min)
- **Methods:**
  - Evaporative cooling
  - Ice packs
  - Cold IV fluids
  - Immersion
- Fluids: NS 500–1000 mL bolus
- Seizures: Diazepam 5–10 mg IV
- Agitation: Diazepam/Midazolam

9. Advanced Management

- Prevent rhabdomyolysis (fluids)
- Correct electrolytes
- Manage liver failure
- Treat DIC

10. ICU Criteria

GCS <8, shock, seizures, organ failure

11. Monitoring

Temp 10–15 min, vitals continuous, urine hourly

12. Complications

AKI, liver failure, DIC, ARDS, death

13. Prevention

Hydration, avoid heat, protective clothing

References

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