Diagnosis and Management of Supraventricular Tachycardia (SVT)

Standard Operating Procedure

Special Region (1)
Union of Myanmar

Version: 1.0

Applies to: ER, Medical Wards, ICU

Effective Date: ___31 March 2026 _____

Review Date: ___31 March 2028_____

1. PURPOSE

To provide a rapid, structured, and safe approach for SVT management.

- Early identification of life-threatening instability
- Prompt rhythm control
- Prevention of recurrence
- Appropriate referral for definitive therapy

2. DEFINITION

SVT is a tachyarrhythmia originating above the ventricles.

- HR >150 bpm (typically 150–250 bpm)
- Narrow QRS (<120 ms)
- Usually regular rhythm

3. CORE PRINCIPLES

- Assess hemodynamic stability first
- Unstable → immediate cardioversion
- Adenosine is diagnostic and therapeutic
- Avoid AV nodal blockers in WPW with AF

4. UNSTABLE SVT

Immediate synchronized cardioversion

- Oxygen + IV access
- Sedation if conscious
- 50–100 J, escalate if needed

5. STABLE SVT

Step 1: Vagal maneuvers (Modified Valsalva preferred)

Step 2: Adenosine 6 mg → 12 mg → repeat 12 mg

Dose and interval of adenosine

Step	Dose	Interval
1st	6 mg IV rapid bolus	—
2nd	12 mg IV	**After 1–2 minutes** if no response
3rd	12 mg IV	**After another 1–2 minutes**

Absolut contraindications of adenosine

Condition	Reason
2nd or 3rd degree AV block (without pacemaker)	Can cause complete heart block / asystole
Sick sinus syndrome (no pacemaker)	Severe bradycardia/asystole
Severe bronchial asthma / active bronchospasm	Can trigger bronchospasm
Irregular wide complex tachycardia (AF with WPW)	May cause VF → sudden death

Step 3: If failed → Verapamil

Dose and interval of verapamil

Step	Dose	Interval
Initial	5 mg IV slow (over 2–3 min)	—
Repeat	5 mg IV	**After 10–15 minutes** if needed
Max total	10–20 mg	—

Absolute contraindications of verapamil

Condition	Reason
Hypotension (SBP <90 mmHg)	Causes vasodilation → shock
Heart failure with reduced EF	Negative inotrope → worsens HF
2nd/3rd degree AV block	Risk of complete block
Sick sinus syndrome	Severe bradycardia
WPW with AF (pre-excited AF)	May trigger VF
Wide complex tachycardia (possible VT)	Can cause hemodynamic collapse

6. SPECIAL NOTES

• Irregular → treat as AF

• Wide complex → treat as VT

• WPW → avoid AV nodal blockers

7. POST-CONVERSION

• Check electrolytes, thyroid, triggers

• Consider beta-blocker for prevention

• Refer for ablation if recurrent

8. DISPOSITION

• Single episode → discharge

• Recurrent → admit

• Unstable → ICU

9. REFERENCES

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