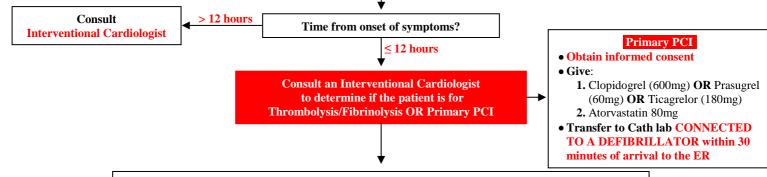
12. STEMI Algorithm

This clinical pathway is intended to supplement, rather than substitute for, professional judgment and may be changed depending upon a patient's individual needs. Failure to comply with this pathway does not represent a breach of the standard of care.

ST-Elevation MI (STEMI)

- Attach the patient to a DEFIBRILATOR
- Establish IV access in left forearm or antecubital vein and send blood samples for UEC, & hsTroponin T
- Aspirin 300mg to chew (if not given by EMS, Not Allergic, No active Upper GI Bleeding or Retinal bleeding, not a haemophiliac, No severe untreated BPs)
- Nitroglycerin sublingual spray 0.4mg SL for pain relief every 5mins up to relief of discomfort or MAX 3 doses reached. DO NOT give nitroglycerin if:
 - SBP < 90mmHg (or 30 mm Hg below the patient's known baseline),
 - Heart rate > 100 bpm, or < 50 bpm.
 - Right ventricular infarction (right ventricular infarction causes a preload dependent state)
 - Use of sildenafil or vardenafil within the previous 24 hours or tadalafil within the previous 48 hours.
- Fentanyl 50µg IV if pain is NOT relieved by the 3 doses of SL nitroglycerin. Repeat once if still in pain after 5 mins. For persistent pain, consult a Cardiologist/Physician. Consider IVI Nitroglycerin (see C/I above)



Thrombolysis/Fibrinolysis

Give:

- 1. Clopidogrel 600mg
- - If age <75 y: 30-mg IV bolus, followed in 15 min by 1 mg/kg SC (max.100 mg for the first 2 doses)
 - If age \geq 75 y: no bolus, 0.75 mg/kg SC (max. 75 mg for the first 2 doses)
 - Regardless of age, if CrCl < 30 mL/min: 1 mg/kg SC
- 3. Atorvastatin 80mg

Review/Complete Fibrinolysis Checklist

- **Absolute Contraindications** □ Any prior intracranial haemorrhage
- Known structural cerebral vascular lesson (e.g., AVM)
- Known malignant intracranial neoplasm (primary or metastatic)
- Ischaemic stroke within 3 months EXCEPT acute ischaemic stroke within 4.5 hours
- Suspected aortic dissection
- Active bleeding or bleeding diathesis (excluding menses)
- Significant closed-head trauma or facial trauma within 3 months
- Intracranial or intraspinal surgery within 2 months
- Severe uncontrolled hypertension (unresponsive to emergency therapy)
- For streptokinase, prior treatment within the previous 6 months

Relative Contraindications

- ☐ History of chronic, severe, poorly controlled hypertension
- \square Severe hypertension on presentation (SBP > 180 mmHg or DBP > 110
- ☐ History of prior ischaemic stroke > 3 months, dementia, or known intracranial pathology not covered in contraindications
- □ Traumatic or prolonged (>10 minutes) CPR
- □ Major surgery (< 3 weeks)
- ☐ Recent (within 2 to 4 weeks) internal bleeding
- □ Non-compressible vascular punctures
- Pregnancy
- □ Active peptic ulcer
- □ Oral anticoagulant therapy

No Contraindications for Fibrinolysis/Thrombolysis

- Obtain informed consent for fibrinolysis/thrombolysis
- Ensure patient is connected to a defibrillator (ECG, SPO₂, BP) and repeat baseline vitals. Administer fibrinolysis/thrombolysis within 30 mins of arrival to ER

Fibrinolytic Agent	Dose	Fibrin Specificity*	Antigenic	Patency Rate (90-min TIMI 2 or 3 flow
Fibrin-specific:				
Tenecteplase (TNK-tPA)	To reconstitute, mix the 50-mg vial in 10 mL sterile water (5 mg/mL). Give IV bolus based on weight as below:			
	< 60 kg - 30 mg (6 mL) 60 to 69 kg - 35 mg (7 mL)	++++	No	85%
	70 to 79 kg - 40 mg (8 mL) 80 to 89 kg - 45 mg (9 mL) ≥ 90 kg - 50 mg (10 mL)			
Reteplase (rPA)	10 U+10-U IV boluses given 30 min apart	++	No	84%
Alteplase (tPA)	Bolus 15 mg, then give infusion of 0.75 mg/kg for 30 min (maximum 50 mg), then 0.5 mg/kg (maximum 35 mg) over the next 60 min; total dose not to exceed 100 mg.	++	No	73% to 84%
Non-fibrin-specific:				
Streptokinase	Set up second IV line for the Streptokinase. The adult dose of streptokinase for STEMI is 1.5 Million U in 50 mL of 5% dextrose in water (D5W) given IV over 30-60 minutes. Allergic reactions force the termination of many infusions before a therapeutic dose can be administered. Run Ringer's	No	Yes§	60% to 68%
	Lactate/Hartmann's Solution TKVO in other line			

^{*}Strength of fibrin specificity; "+ + + +" is more strong, "+ +" is less strong.

§Streptokinase is highly antigenic and absolutely contraindicated within 6 mo of previous exposure because of the potential for serious allergic

IV indicates intravenous; rPA, reteplase plasminogen activator; TIMI, Thrombolysis In Myocardial Infarction; TNK-tPA, tenecteplase tissue-type plasminogen activator; and tPA, tissue-type plasminogen activator.

- Monitor vital signs (BP, PR, RR, SPO2) every 15 minutes during the infusions
- Continue monitoring patient for 30mins after the end of the infusions
- Transfer patient to CCU/ICU CONNECTED TO A DEFIBRILLATOR