CardioVascular HEALTH NOVA SCOTIA

Nova Scotia Algorithm for Emergency Care of Acute Coronary Syndromes

Chest pain or suspicion of ACS at triage

- ✔ STAT or EHS ECG completed & interpreted by MD within 10 minutes

ST segment changes or new LBBB?

NO

- ✔ Triage as per CTAS (Canadian ED Triage Acuity Scale)
- ✔ Initiate chest pain workup

ACS Suspected

YES

- ✔ Move to ED monitored bed
- ✔ MD assessment & diagnosis

Diagnosis of

UA/NSTEMI **STEMI**

Definite UA/NSTEMI

- ✔ Vital signs
- ✔ IV x 1
- ✔ Oxygen
- ✔ ASA 160-325 mg po
- ✔ Clopidogrel 300 mg po
- ✔ Nitroglycerin sl or IV prn
- ✔ Opiates prn
- ✔ Beta blocker prn, **if** hemodynamically stable **and** no heart failure
- ✔ Fondaparinux 2.5 mg subcut **or** UFH 60 IU per kg bolus (max 4000 IU) + 12 IU per kg per hr (max 1000 IU per hr) **if** Creatinine Clearance (CrCl) <30 mL per min, mechanical heart valves, or cardiac cath within 12 h.
- ✔ CBC, Lytes, BUN, Cr, Glucose, INR, PTT, Troponin
- ✔ Repeat ECG, consider 15 lead
- ✔ Portable CXR

Is the UA/NSTEMI patient high risk?

YES

UA/NSTEMI High Risk

- Hypotension (with other supportive evidence of ischemia) or definite evidence of heart failure
- Recurrent ventricular arrhythmias
- Transient ST elevation
- New ST depression ≥ 2 mm in ≥ 3 leads
- Recurrent or refractory ischemia **despite** initial therapy
- TIMI risk score 5-7

Consult Cardiologist/Internist

- ✔ Cath ± PCI within 24-48 hours

STEMI

- ✔ Vital signs
- ✔ IV x 2
- ✔ Oxygen
- ✔ ASA 160-325 mg po
- ✔ Clopidogrel 300 mg po (reduce dose to 75 mg **if** ≥75 yrs & receiving TNK)
- ✔ Nitroglycerin sl or IV prn
- ✔ Opiates prn
- ✔ Beta blocker prn, **if** hemodynamically stable **and** no heart failure
- ✔ CBC, Lytes, BUN, Cr, Glucose, INR, PTT, Troponin, type & screen
- ✔ Repeat ECG, consider 15 lead
- ✔ Portable CXR

Eligible for Primary PCI?

- Door to balloon time <90 min

OR

- Cardiogenic Shock

NO

Consider TNK

- Goal: Door to needle time <30 min
- Onset of pain should be <12 h

- ✔ Assess contraindications [1]
- ✔ **If** contraindications consider PCI
- ✔ Obtain consent
- ✔ Antithrombin selection [2] ASAP after TNK
- ✔ ECG at 90 min post administration and review with Cardiologist/ Internist for reperfusion failure

YES

Consider Primary PCI

- Onset of pain should be <12 h

- ✔ Assess contraindications [3]
- ✔ **If** contraindications consider TNK
- ✔ Discuss with interventional cardiologist
- ✔ Obtain consent
- ✔ Arrange transfer to cath lab ✻

1 Thrombolytic Therapy

Absolute Contraindications

- Any prior intracranial hemorrhage
- Known structural cerebral vascular lesion
- Known malignant intracranial neoplasm
- Suspected aortic dissection
- Active bleeding or bleeding diathesis
- Significant closed head or facial trauma within 3 months
- Ischemic stroke within 3 months **except** acute ischemic stroke within 4.5 hours

2 Antithrombin Options for TNK Patients

CHOOSE ONE

- ✔ Enoxaparin
  - Contraindicated **if** CrCl <30 mL per min **or** concerned about bleeding
  - <75 yrs—30 mg IV bolus followed by 1 mg per kg subcut bid (max 100 mg per dose)
  - ≥75 yrs—0.75 mg per kg subcut bid (max 75 mg per dose)
- ✔ Unfractionated Heparin **if** Enoxaparin Contraindicated:
  - 60 IU per kg bolus (max 4000 IU) + 12 IU per kg per hr (max 1000 IU per hr); target aPTT: 50-70 (use local nomogram).

3 Primary PCI

Contraindications

- Terminal co-morbidities limiting lifespan <1 year
- Severe dementia

Discuss options with interventional cardiologist **if**:

- Previous CABG
- Significant PVD

✻ Cath Lab Contact Numbers

Daytime

902-473-6532 or 902-473-6633

Evening/Weekend/Holiday

QEII can activate Primary PCI via 473-2222/2220

All others page the on-call Interventional Cardiologist: 902-473-2222/2220

This algorithm is intended to serve as a guide and cannot replace clinical judgement.

Nova Scotia Guidelines for Acute Coronary Syndromes. Cardiovascular Health Nova Scotia 2008. For complete guidelines, refer to **www.gov.ns.ca/health/cvhns**

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