Immediate Management of Acute Coronary Syndrome - Dr Kua Jieli

Trending of Troponin 00:23

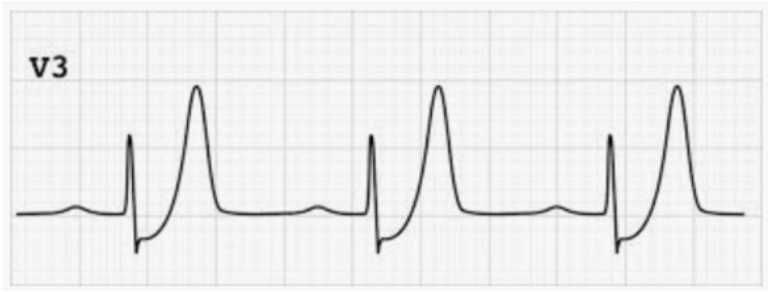
- New troponin assays are very sensitive
- First trop can be done immediately on first presentation
- 2nd troponin and be done in 2-3 hours
- Usually if 2nd trop negative, unlikely myocardial infarction; but if still concerned, can potentially do a third trop
- Generally, don't need to trend trops downtrend or normalize except for myocarditis

Role for CK and CKMB 03:10

- Limited role

Are there STEMI equivalents that do not show ST segment elevation? 03:26

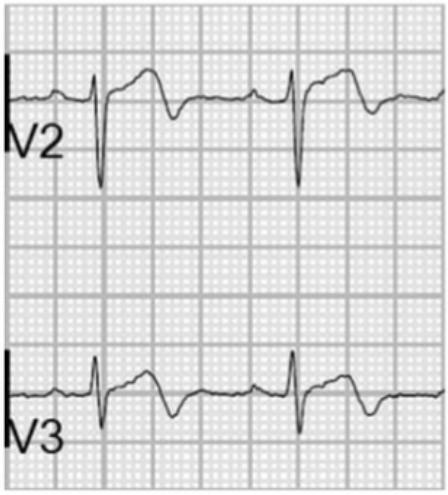
- De Winter's



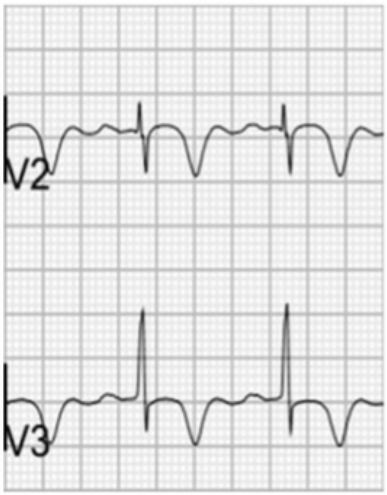
https://litfl.com/de-winter-t-wave-ecg-library/

- Wellen's

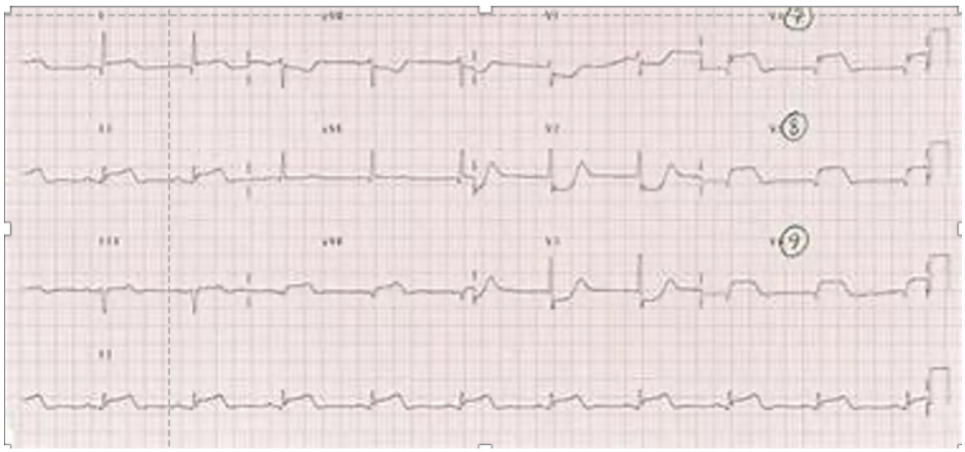
Type A (biphasic T waves)



Type B (deeply inverted T waves)



- New LBBB
- Posterior STEMIs



Do all NSTEMIs demonstrate ST T wave changes? 06:00

- No – NSTEMIs can present with chest pain and troponin elevation without ECG changes

MONA – Is this still relevant? 06:20

- Morphine and oxygen not routinely given – unless severe pain or hypoxemia
- Caution with nitrates if suspecting inferior MIs

Choice of Antiplatelet Agents? 07:15

- Generally, give aspirin + ticagrelor as the default 2nd antiplatelet agent
- Clopidogrel in: Stable elective patients, when used in conjunction with anticoagulants, increased bleeding risk, cost issues
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- Trials: PLATO (Ticagrelor), TRITO (Prasugrel), ISAR-REACT (Ticagrelor vs Prasugrel)
- Prasugrel
    - Prasugrel given only after coronary anatomy known
    - Contraindications: Stroke, age > 75, body weight < 60kg

Anticoagulation in ACS? 10:38

- Clexane should generally be given In all 'real' NSTEMIs
- Especially in patients coming in over the weekend where PCI may be delayed for a few days
- When to consider holding off
    - Increase bleeding risk (e.g. older patients)
    - If PCI is anticipated to be in a few hours – e.g. patient clerked in at 4am (aim 6hour window period after clexane before PCI procedure)

When do patients with NSTEMI require emergent revascularization? 12:26

- Ongoing typical chest pain
- Ischemia triggering heart failure
- Ventricular arrhythmias

Which patients require telemetry monitoring? 13:52

- All patients with ACS should get telemetry monitoring until they get revascularized

What complications should we be looking out for post PCI? 15:07

- Vascular complications from femoral access – highest risk in first 6 hours
- Some ST elevation and chest pain may persist, but should not be worse than pre-revascularisation

- Heart failure
- Consider IV hydration if on CKD to reduce risk of CIN post PCI

T2MIs and Trop Leaks? 17:37

- Type 2 MIs
  - Rise and fall in cardiac enzymes
  - Supply demand mismatch
  - Management of underlying cause
  - In terms of antiplatelet therapy, depends on overall cardiovascular risk and clinical picture
  - Consider IHD evaluation post T2MI
- Troponin Leak – Perhaps better termed as myocardial injury
  - No rise and fall in enyzmes but troponin raised
  - Important for troponin to be performed in the right clinical context

Take Home Points 21:36

- DAPT: Aspirin + Usually ticagrelor
- High dose statins
- Beta blockers are important upfront to reduce ischemic burden
- Know when to escalate – Ongoing chest pain in NSTEMI, STEMI equivalent patterns