



CARDIOLOGY IN A MINUTE - FACTS AND INFORMATION FOR THE BUSY GP

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UPDATE ON ACUTE CORONARY SYNDROMES

- **Faster diagnosis**
 - High-sensitivity troponin T now in use in some pathology labs, 60-80% of MI patients will have a positive troponin on arrival and 100% at 3 hours of arrival (versus 6-12 hours)
 - 12-lead ECG machines have been fitted in some ambulances in the Perth metropolitan area as part of the PEACS trial. 12-lead ECGs can be performed in ambulance and transmitted to ED doctors via fax to activate the angioplasty team more quickly.
- **Improved door-to-balloon time for ST elevation MI**
 - The “time is muscle” mantra of the thrombolytic era also applies to primary angioplasty for ST elevation MI
 - Improved systems at our public hospitals have led to an average reduction in “door-to-balloon” times of around 20 minutes
 - Heart Care WA/Coastal cardiology offer a 24/7 angioplasty service at The Mount and St John of God Hospital, Murdoch
- **Thrombo-aspiration**
 - Something as simple as aspirating the thrombus prior to the balloon dilatation for ST elevation MI's, with devices such as the Export or Fetch catheters, is associated not only with good angiographic results (improved flow), but lower mortality and re-infarction rates out to one year post-MI
- **Lowering the bleeding risk for ACS**
 - The new direct anti-thrombotic agent, bivalirudin, appears to have all the advantages of the conventional strategy of IV unfractionated heparin plus the potent anti-platelet agent abciximab (Reopro) but with a lower risk of major bleeding complications and thrombocytopenia
 - This has resulted in significantly lower morbidity and mortality in STEMI patients
- **Safety of drug-eluting stents in STEMI**
 - Recent studies have provided reassurance that there is no excess risk of stent thrombosis, MI or death with the use of drug-eluting stents (DES) versus bare-metal stents (BMS), at least out to 3 years in this high-risk population.
 - As in elective angioplasty, DES are associated with a much lower need for repeat revascularisation than BMS
 - We anticipate similar, if not better, results with the second-generation (everolimus and zotarolimus) stents
- **More reliable, potent anti-platelet agents**
 - Prasugrel is a more potent, faster acting and predictable anti-platelet agent that combined with aspirin is associated with a significant reduction in stent thrombosis compared with a regimen of aspirin and clopidogrel.
 - It is, however, associated with a higher risk of major (including fatal) bleeds and should not be used in the over 75's, or those with a low body weight (<65kg) or a history of stroke/TIA
 - Ticagrelor is a novel anti-platelet agent not yet available in Australia, but may have some of the advantages of Prasugrel without the same bleeding risk. Its shorter half-life may make it easier to use in those with stents undergoing non-cardiac surgery.

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