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Title: "Requiring Intravenous Nitroglycerin" Should be considered a High Risk Feature in Patients with Non-ST Elevation Myocardial Infarction and Unstable Angina.

Background:

Early risk stratification of patients with unstable angina (UA) and non-ST elevation myocardial infarction (NSTEMI) is crucial to identify those at high risk for further cardiac events as they may benefit from an early invasive strategy of coronary angiography and revascularization. The TIMI score, a widely used predictive model to guide management strategy in UA and NSTEMI may not accurately stratify risk.

Methods:

Case report and literature review.

Results:

A 63-year-old man, who is an active smoker with past medical history of hypertension and dyslipidemia, presented with severe sub-sternal, crushing chest pain, which began four hours prior to presentation. His EKG revealed sinus tachycardia, without ST segment deviations or Q waves. He received aspirin, three doses of sublingual nitroglycerin and metoprolol, but continued to have chest pain, thus he was commenced on intravenous nitroglycerin infusion. His chest pain went away after two hours on nitroglycerin infusion. His initial serum troponin I was 0.31ng/mL and 3.60ng/mL four hours after presentation. He was admitted for NSTEMI and started on clopidogrel, atorvastatin and intravenous heparin. Echocardiogram revealed inferio-septal wall akinesis and severely reduced left ventricular systolic function. His troponin I continued to rise, peaking at 37.4ng/mL. He was started on eptifibatide and was referred for coronary angiography and percutaneous coronary intervention, with finding of fifty percent proximal and distal left anterior descending artery (LAD) lesions.

Conclusion:

With a TIMI score of 2, our patient was classified as low risk at presentation. The need for intravenous nitroglycerin infusion for continuing chest pain in the management of UA or NSTEMI may suggest a greater degree of myocardial ischemia and a higher risk for adverse cardiovascular outcomes. This case demonstrates that UA and NSTEMI patients requiring intravenous nitroglycerin initially planned for conservative therapeutic approach need continuous risk stratification which may dictate a change to the invasive management strategy.