

High sensitivity troponins in non-ST segment elevation acute coronary syndromes at Mater Dei Hospital... use or abuse?

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Background

hs-cTnT was introduced into clinical practice to expedite diagnosis of myocardial injury and exclude low-risk individuals. ESC Guidelines for the management of ACS in patients presenting without persistent ST segment elevation, 2015, recommend measurement of high sensitivity cardiac Troponin at 0 hours and 3 hours.

Aim

To audit our local clinical practice with respect to timing of the second hs-cTnT sampling in patients admitted with chest pain., excluding ST elevation myocardial infarctions.

Methodology

Retrospective analysis of all patients admitted with “Chest Pain” as their provisional diagnosis from 1st January 2017 to 28th February 2017 was carried out. Patient data was obtained from admission booklets held at A&E department. Further data was collected from iSoft Clinical Manager and Electronic Case Summary. Data collected included patient demographics, blood results and discharge diagnosis. Data was inputted and analysed using Microsoft Excel 2007.

Results

A total number of 741 patients were admitted with a provisional diagnosis of “Chest Pain”. 679 patients were recruited: 44 were excluded as the discharge diagnosis was STEMI, another 18 patients were excluded as they did not have a repeat Troponin taken during their admission. 223 patients were female.

Age at the time of admission	
Mean	63.83
Standard Error	0.63
Median	65
Mode	65
Standard Deviation	16.57

The mean time elapsed between 1st and 2nd hs-cTnT sampling was 6.1 hours, median 5 hours.

Time elapsed between 1st and 2nd troponin	
Mean	6.14
Median	5
Mode	6
Standard Deviation	4.40
Standard Error	0.17

Conclusion

The above results show that we are not following 2015 ESC recommended guidelines for timing of 2nd hs-cTnT. This may potentially lead to a delay of diagnosis of myocardial injury and/or early discharge of low risk individuals.

References

ESC Guidelines for the management of acute coronary syndromes in patients presenting without persistent ST-segment elevation. 2015. Task Force for the Management of Acute Coronary Syndromes in Patients Presenting without Persistent ST-Segment Elevation of the European Society of Cardiology (ESC)