Acute Coronary Syndromes

HIGH SENSITIVITY TROPONIN HAS NO DIAGNOSTIC VALUE FOR MYOCARDIAL INFARCTION IN STAGE IV-V OF RENAL INSUFFICIENCY

Poster Contributions
Hall C
Saturday, March 29, 2014, 3:45 p.m.-4:30 p.m.

Session Title: Acute Coronary Syndromes: Comorbid Considerations
Abstract Category: 1. Acute Coronary Syndromes: Clinical
Presentation Number: 1152-250

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Background: Renal insufficiency (RI) is a well known limiting factor in the evaluation of myocardial infarction (MI) with troponin (Tn); this is particularly true for TnT. However it is unknown in which amount the stage of RI influences Tn level. To this aim, we investigated the area under the curve (AUC) of 3 different Tn assays (2 TnT and 1 TnI) according to the stage of RI.

Methods: 452 pts with chest pain were enrolled in the ER, 392 (86%) were discharged without diagnosis of Acute Coronary Syndrome (ACS) and 60 (14%) with a diagnosis of ACS. We evaluated 3 different assays: cTnI LOCI (Siemens), Roche cTnT and Roche hsTnT. The population was classified according to the glomerular filtration rate (GFR) level: GFR$\geq$ 60 ml/min (stage I-II), GFR<60>30 ml/min (stage III), GFR <30 ml/min (stage IV-V). The AUC was assessed either by continuous values (Cont) and categorical values (Cat).

Results: each Tn lost predictive value for MI with increasing stage of RI, in particular hsTnT in stage IV-V had an AUC of 0.500 (see table).

	AUC Cont.	AUC Cat.	SE	SP
All groups				
cTnI LOCI(Siemens)	0.819	0.795	63%	96%
Roche cTnT	0.804	0.784	62%	95%
Roche hsTnT	0.865	0.780	77%	80%
GFR$\geq$ 60 ml/min (stage I-II)				
cTnI LOCI(Siemens)	0.808	0.806	64%	97%
Roche cTnT	0.772	0.770	56%	98%
Roche hsTnT	0.888	0.809	72%	90%
GFR<60>30 ml/min (stage III)				
cTnI LOCI(Siemens)	0.835	0.806	68%	93%
Roche cTnT	0.824	0.788	64%	93%
Roche hsTnT	0.808	0.693	75%	64%
GFR <30 ml/min (stage IV-V)				
cTnI LOCI(Siemens)	0.740	0.669	43%	91%
Roche cTnT	0.623	0.584	71%	46%
Roche hsTnT	0.623	0.500	-	-

Conclusion: our study demonstrates that Tn levels have a poor performance in case of advanced RI, in particular hsTnT use should be avoided because of its null discrimination power.