

Direct impact of Troponin I testing on the early diagnosis of

ISW Tosoh Bioscience

Pau Casals Room, 10:00 a.m. – 11:15 a.m.

X THE USE OF THE TOSOH AIA-600II AND AIA-1800 IMMUNOASSAY ANALYSERS FOR THE DETERMINATION OF CTNI

Chapelle, J.P.(1); Aldenhoff, M.C. (1); Giele, N.J. (1)

(1) Department of Clinical Chemistry, University of Liège, chu b35, B-4000 Liège, Belgium

Cardiac troponin I (cTnI) is a sensitive and specific marker for myocardial damage. We evaluated the new serum cTnI assay available on the AIA 600II analyser (Tosoh Bioscience, Belgium), an easy-to-use instrument particularly well adapted to the emergency laboratory. According to the kit insert, the 99th percentile of the reference values was 0.06 µg/L. The data obtained on the AIA 600II are as follows. The intra- and inter-assay CVs determined on plasma pools with increased cTnI concentrations were 3.4 and 5.2 % (cTnI = 0.36 µg/L) and 1.9 and 4.4 % (cTnI = 3.05 µg/L), respectively. For cTnI concentrations around the decision limit (0.05, 0.07 and 0.12 µg/L), the intra-assay CVs determined on 20 replicates were 11.9, 11.7 and 7.6 %, respectively. The assay showed no cross-reactivity with muscular TnI. Serial dilutions of plasma samples with high cTnI in plasma with undetectable cTnI concentrations exhibited good linearity. The comparison with the cTnI technique on Vidas (BioMérieux, France) using 267 samples with cTnI concentrations ranging from 0.0 to 83.8 µg/L (AIA), gave the following results : y (AIA) = 1.44 (Vidas) + 0.19, $r = 0.99$. A comparison between the AIA 600II and AIA 1800 has been performed ; the results will be discussed. In conclusion, the new TOSOH assay has excellent performances, particularly in terms of precision in the low concentration range and allows a rapid, fully automated and accurate determination of cTnI in blood samples.