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Symposium Tuesday 13 June - STATE OF THE ART IN CARDIAC MARKERS

HOW CAN THE LABORATORY HELP CLINICIANS? THE "HIGH-SENSITIVITY" TROPONIN PARADIGM

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The availability of so-called "high-sensitivity" troponin assays (hsTns) has scored a compelling goal for Laboratory Medicine, allowing the safe clinical application of international recommendations for the definition of acute myocardial infarction (AMI). However, clinicians, claiming an increase in "false-positive" results, have often not welcomed the introduction of hsTns. In fact, the availability of hsTns has reinforced the need of changes to diagnostic rules and only serial testing incorporated in running algorithms may allow an accurate diagnosis of AMI. To guide interpretation of results, typical release patterns suggestive for AMI should be identified by evaluating the significance of hsTns concentration changes. Fast track protocols for ruling out/in non-ST elevation AMI have been optimized to recommend sampling at presentation and after 3 h only. Accordingly, hsTns have markedly shortened the time to rule out or rule in AMI. However, rapid diagnostic protocols should be performed only using well-validated hsTns and the use of assays before their robust analytical and clinical validation should be discouraged. Finally, a cost-effective use of hsTns should account for all clinical variables increasing the pre-test probability in order to ensure that tests are ordered only for patients at medium to high risk for acute coronary syndrome.