BIC-8: Instant early rule-out using cardiac troponin and copeptin in low- to intermediate-risk patients with suspected ACS: A prospective, randomized multicenter study

History: This investigation tests the biomarker Copeptin in patients with suspected ACS with unspecific ECGs and who test negative in their initial Troponin tests upon admission to the ER.

Questions to answer: This trial compares two processes of managing patients with suspected acute coronary syndrome (ACS), the standard process according to current guidelines and the experimental process integrating copeptin as a rule-out marker for acute myocardial infarction into management decisions.

Trial Design	Interventional, prospective, randomized, multicenter study; N=902; 30 days of f/u Patients with initial troponin negative test, randomized to standard management (blinded copeptin results) vs. copeptin testing (negative copeptin – discharged with 72 hour f/u; positive copeptin – standard guideline treatment)	
Primary Endpoint	• Rate of major adverse cardiac events (MACE) within 30 days Copeptin vs. Control • Rate of MACE (all- cause death or survived sudden cardiac arrest, MI, re-hospitalisation for ACS, acute unplanned PCI, CABG and documented life-threatening arrhythmias (VF, VT, AV-block III)) within 30 days Copeptin vs. Control (non-inferiority)	
Trial Results at 30 days	**Control arm** MACE- 5.5% ER discharge rates – 66% p<0.001	**Experimental arm** MACE - 5.46% ER discharge rates – 12%

Take Away: In suspected ACS, triaging patients in the emergency room using two biomarkers, troponin and copeptin assays, resulted in early and safe discharge for appropriate patients. These results have the potential to change clinical practice.

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