

## **Impact of the Definition Utilized on the Rate of Contrast-Induced Nephropathy in Patients Undergoing Percutaneous Coronary Intervention: The Oxilan Registry**

Refat Jabara<sup>1,2</sup>, Radhika Gadesam<sup>2</sup>, Lakshmana Pendyala<sup>2</sup>, William Knopf<sup>2</sup>, Nicolas Chronos<sup>2</sup>, Jack Chen<sup>2</sup>, Spencer King<sup>2</sup>, Steven Manoukian<sup>3</sup>

<sup>1</sup> Heart Institute, Hadassah-Hebrew University Medical Center, Jerusalem, Israel,

<sup>2</sup> Cardiovascular Research Institute, Saint Joseph's Hospital, Atlanta, GA, <sup>3</sup> Sarah Cannon Research Institute and Centennial Heart Center, Nashville, TN, USA

**Objectives:** The Oxilan Registry is the first-ever prospective study evaluating the efficacy and safety of ioxilan (low-osmolar and low-viscosity contrast medium) including rates of contrast-induced nephropathy (CIN) assessed by multiple definitions, in patients undergoing percutaneous coronary intervention (PCI).

**Methods:** From July 2006 to June 2007, consecutive patients undergoing PCI utilizing ioxilan were enrolled. Serum creatinine (SCr) and estimated glomerular filtration rate (eGFR) were assessed at baseline and 3 to 5 days post-PCI. CIN was defined as: SCr increase  $\geq 0.5$  mg/dL, eGFR decrease  $\geq 25\%$ , SCr increase  $\geq 25\%$ , or the composite.

**Results:** Of 400 patients (age  $62 \pm 11$  years), 19% were female, 37% diabetic, 22% anemic, and 8% had a history of congestive heart failure. Baseline SCr was  $1.12 \pm 0.3$  mg/dL, and 24% had an eGFR  $< 60$  mL/min. CIN rates were: 3.3% (SCr increase  $\geq 0.5$  mg/dL), 7.6% (eGFR decrease  $\geq 25\%$ ), 10.2% (SCr increase  $\geq 25\%$ ), and 10.5% (composite), depending upon the definition utilized. Hospitalization was prolonged in 3.4% of patients with CIN and none required dialysis. There were no deaths or severe allergic reactions. Non-ST-elevation myocardial infarction and repeat revascularization each occurred in 0.8%.

**Conclusions:** Ioxilan is effective and safe in PCI. In this unselected population, CIN ranged from 3.3% to 10.5% depending upon the definition utilized and was not associated with mortality or substantial morbidity, such as dialysis. The wide variation in CIN, as well as its lack of association with adverse outcomes, underscores the need for a standardized, clinically relevant definition.