Abstract: **P3614**

Impact of renal dysfunction in patients with acute myocardial infarction on early management and outcome: a first observational french study

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Background: Kidney dysfunction (KD) is largely associated to cardiovascular mortality.

Purpose: Analyse early management and outcome in real life of ST segment elevation myocardial infarction (STEMI) patients with KD compared to STEMI patients with normal renal function.

Methods: Using 10 years' data from OSCAR regional registry, we investigated the early management and outcome of all patients with STEMI. Kidney dysfunction (KD) has been defined by creatinine clearance (CrCl) <90mL/min and was assessed using Cockcroft-Gault (CG) equation. Among them, two groups were identified: patients with normal kidney function (NKF) (CrCl =90mL/min) and patients with KD (CrCl <90mL/min). KD patients were stratified into 3 groups: patients with mild KD (CrCl 60-90mL/min), patients with moderate KD (CrCl 30-60mL/min) and patients with severe KD (CrCl <30mL/min). The comparison of the groups concerned patient characteristics, therapeutic strategy and follow-up at 1, 6 and 12 months.

Results: Our study included 8 003 STEMI patients from 2009 to 2018, 4 234 (52.9%) of them with KD. Among these, 2441 (57.6%) patients had mild KD, 1494 (35.3%) moderate KD and 299 (7.1%) severe KD. NKF patients were younger than KD group (54 [48-61] vs 72 [63-81]). KD patients had more cardiovascular risk factors such as diabetes, hypertension and personal history of coronary disease ($p<0.001$), but were less smokers ($p<0,001$). KD patients presented less often chest pain, and more dyspnea or cardiac arrest ($p<0,001$). There was no difference in symptom-first medical contact delay ($p = 0.30$). More than 14% of patients with KD presented with Killip=2. In the KD group location of infarction was more often anterior and lateral. In-hospital treatment differed among the groups: KD patients received less prasugrel (11% vs 20%), ticagrelor (44% vs 49%), enoxaparin (70% vs 80%), morphine (29% vs 39%) or other analgesic (30% vs 35%), but more clopidogrel (33% vs 23%), diuretics (3% vs 0,7%) and catecholamines (5% vs 2%) ($p<0.001$). In-hospital mortality was higher in the KD group (9% vs 1%, $p<0.001$). One-year mortality was 14% in the KD group compared to 2% for patients with NKF ($p<0.001$). Also, in-hospital mortality was increasing exponentially with KD severity (2%, 8% and 24% for mild, moderate and severe KD) ($p<0,001$) as well as 1-year mortality (respectively 1%, 6% and 12% after 1 year) ($p<0,001$).

Conclusion: Kidney insufficiency is an independent risk factor for death in patients after myocardial infarction and was associated with poor prognosis at short- and long-term. We observed that mortality increased with KD severity. Despite a high cardiovascular risk, KD patients presenting STEMI are less likely to receive therapy, while having more co-morbidities and extended infarction. To achieve an optimal medical care of KD patients with STEMI, we should introduce evidence-based therapies in the acute phase.