Incidence and risk factors of contrast-induced nephropathy after coronaryography

Fatma Mghaeth (1), Rym Ben Rejeb (1), Sanni Mourali (1), Ramy Trabelsi (1), Abdeljalil Farhati (2), Kéchida Zohra (1), Salem Abbesalem (3), Rafik Bousada (4), Rachid Mechmèche (3)

(1) Hôpital La Rabta, Cardiologie, Tunis, Tunisie - (2) Hôpital La Rabta , Tunis, Tunisie - (3) Hôpital La Rabta, Tunis, Tunisie - (4) Hôpital La Rabta, Tunis, Tunisie

The incidence of contrast-induced nephropathy (CIN) is variably estimated among studies. CIN is associated with increased morbidity.

Aim: To determine the incidence of CIN and to identify its risk factors.

Methods and population: In this cohort study, 1800 consecutive patients (age=58.9±11.1 years [30-84], 62.8% males, 41.1% diabetics, and 22.8% with creatinine clearance 60 ml/min) with various diagnoses had a coronaryography investigation and were prospectively enrolled. CIN was defined by an acute impairment of the renal function occurring within 3 days after contrast media administration in the absence of an alternative etiology with an elevation of the serum creatinine level by 0.5 mg/dl or 25%. The incidence of CIN was 17.2%. Factors related to CIN were: Age>60 years, diabetes, creatinine clearance < 80 ml/min, emergency investigation, left ventricular ejection fraction (LVEF) < 45%, multi-vessel coronary lesions or lesion of left main coronary artery, per-procedural hypotension (systolic pressure < 80mmHg), treatment with furosemide or aspirinolactone diuretics and volume of injected contrast media (CMV) > 90ml. In a multivariate step wise model, 5 independent risk factors of CIN were identified: per-procedural hypotension (hazard ratio (HR)=3.99, CI95% [1.65-9.66], p=0.002), creatinine clearance <80ml/min (HR=2.87, CI95% [1.59-5.19], p=0.001), diabetes (HR=2.26, CI95% [1.29-3.98], p=0.005), LVEF<45% (HR=2.03, CI95% [1.22-3.39], p=0.007), and CMV >90ml (HR=1.72, CI95% [0.99-2.99], p=0.054). Age is related to creatinine clearance and increases the risk of CIN through this factor. Renal insufficiency and diabetes are mutually enhancing factors for CIN. 93% of our patients recover normal renal function within 15 days. 2 deaths and 2 terminal renal insufficiencies were noted in patients with CIN within 3 months of follow-up.

Conclusion: Delimitating a target population with risk factors of CIN is a key step for its prevention.

Thrombolytic therapy in pulmonary embolism

Wejedine Ouechtati, Leila Bezdeh, Ali Belneni, Riadh Kasri, Emna Allouche

Hôpital Charles Nicolle Tunis, Cardiologie, Tunis, Tunisie

Introduction: Pulmonary embolism (PE) is a relatively common cardiovascular emergency. PE is a difficult diagnosis that may be missed because of non-specific clinical presentation. Non invasive investigations are compulsory to confirm PE. The management of PE is now well codified especially massive PE.

Observations: 2 women aged respectively of 28 and 34 years, hospitalized in our hospital for massive pulmonary embolism with poor hemodynamic state. For the first patient the diagnosis is confirmed by TTE showing thrombus in the right atrium and left pulmonary artery and by computed tomography angiography. The two patients received thrombolytic treatment by recombiant tissue plasminogen activator (tPA) with favorable outcome.

Conclusion: Thrombolytic therapy is the first-line treatment in patients with high-risk PE presenting with cardiogenic shock and/or persistent arterial hypotension, with very few absolute contraindications.