Aim: The aim of this study is to identify the best cardiac Troponin I (cTnI) ratio to detect asymptomatic graft or anastomoses anomalies after myocardial revascularization.

Methods: Patients with a rising cTnI profile, based on measurements at 6 and 12 hours (cTnI 12 hours : 6 hours ratio >1) after the last anastomosis in off-pump surgery or after cardiopulmonary bypass in on-pump surgery, underwent a coronary angiogram, despite an uncomplicated postoperative course and absence of electrocardiogram changes. The optimal threshold value for the ratio was determined using a receiving operator characteristic (ROC) curve.

Results: From April 2005 to May 2011, among 1693 patients undergoing isolated coronary artery bypass graft (CABG), 29 (1.7%) had a cTnI ratio >1 and underwent postoperative angiography. Twenty abnormalities were observed in 16 patients (55%). In the anastomoses, there were four occlusions and four stenosis. In the grafts, there were 12 stenosis: two of the Y graft anastomosis, two dissections, five hematomas and three kinking. TIMI flow grade based on results of the thrombolysis in myocardial infarction trial was 3 in six patients, 1 in five, and 0 in five. In the 16 patients with lesions, the cTnI ratio was 2.1±1.4 versus 1.4±0.3 in patients with no lesions (p=0.09). A ratio of 1.3 (p=0.003) was determined by ROC curve analysis as having the greatest discriminant capacity, with associated sensitivity of 87.5% and specificity of 62%.

Conclusion: A cTnI 12 hours : 6 hours ratio >1.3 may be indicative of these abnormalities. Early identification of these anomalies may avoid adverse outcomes.

Biography
Sidney Chocron is the Head of Department of Cardiac Surgery in Besancon (France). He has published more than 100 papers in reputed journals. He built internet websites with techniques of surgical myocardial revascularization using only the two mammary arteries and other surgical videos.

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