076 **Which patients should undergo duplex carotid screening prior to coronary artery surgery?**

V. Aboyans, P. Lacroix, C. Chauvreau M. Sellami, S. Karoutsos, V. Vrba, E. Cornu, M. Laskar
Department of Thoracic and Cardiovascular Surgery, Dupuytren University Hospital, Limoges, France

Introduction: Despite surgical techniques and medical care improvements, the rate of stroke after coronary bypass artery grafting (CABG) remains stable, mainly due to the ageing of the candidates and a growing prevalence of multi-focal atherosclerotic patients. Around half of these post-operative events are due to the high prevalence of cerebrovascular disease in these patients. We aimed to study the risk factors of the presence of significant carotid lesions in these patients in order to optimize the screening.
Method: We prospectively studied 1043 consecutive candidates for CABG. A first subgroup of 825 patients was studied to establish the predictive model. In addition to their clinical and coronary angiography data, the results of physical examination and ankle-brachial index (ABI) measurements were noted. Next they benefited from a systematic Duplex study. Those with an artery stenosis >50% were considered as having significant lesion. A multivariate analysis by logistic multiple regression was then performed to determine significant risk factors. The following 218 patients benefited from the same assessment protocol, and the ability of the model to predict >50% stenosis of the neck arteries has been assessed, comparing to Duplex data.
Results: Among the first 825 patients, 108 (13.1%) had at least one significant lesion in their neck arteries. The independent risk factors were: past history of stroke or transient ischaemic attack, neck bruit, patent peripheral arterial disease (PAD), subclinical PAD (ABI <0.85), and age >70 years. Among the subsequent 218 patients, the presence of at least one of these factors was able to detect 24 out of 26 (92.3%) patients with a significant stenosis, and could rule out 41% of them from a systematic Duplex screening. The overall sensitivity of this approach is 90%, with a negative predictive value of 96%, permitting a dramatic reduction in the number of Duplex assessments, by excluding low-risk patients.
Discussions: The excellent sensitivity of this risk assessment approach, enhanced by the use of a bedside ankle-brachial index measurement, is able to perform a cost-effective screening for cerebrovascular disease in CABG patients.