

## Prevalence of Carotid Stenosis in Elective CABG Patients

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### Abstract

**Background:** Atherosclerosis is a systemic disease involving different arterial territories. While cardiac involvement is rather symptomatic in most patients, carotid lesions are silent until an acute ischemic cerebral event happens. Ultrasound carotid screening is often part of the preoperative protocol for coronary bypass surgery patients to predict the risk of stroke.

**Aim:** The aim of this paper is to evaluate the prevalence of severe carotid artery stenosis (CAS) in candidate patients for coronary bypass surgery (CABG), its correlations with severity of coronary artery disease (CAD) and atherosclerotic risk factors and its impact in CABG outcome.

Study design: Cohort study.

**Material and Method:** 211 consecutive patients hospitalized for elective CABG from January

2012 to December 2018 were screened for CAS with preoperative Duplex ultrasound. All patients had CABG and no intervention for CAS prior or concomitant with it. Their clinical recordings were retrospectively controlled for presence and severity of CAS, classic atherosclerotic risk factors, CAD severity and the outcome of surgery. CAS severity was graded according to hemodynamic parameters measured with Duplex ultrasound. Occlusion or  $\geq 70\%$  stenosis of at least one internal carotid artery was considered severe. **Results:** 32 patients (15.2%) had severe CAS, 13.3% with  $\geq 70\%$  stenosis and 1.9% with occlusion of Internal Carotid Artery (ICA).

There was no statistically significant correlation between the prevalence of severe carotid artery stenosis and the prevalence of atherosclerotic risk factors or the severity of coronary artery disease,

although there was a statistically significant higher prevalence of ICA occlusion for female sex. Two patients (0.95%) had in-hospital stroke, one transient and one persistent.

There were only 4 (1.9%) in hospital deaths, none of them due to cerebro – vascular complication.

**Conclusions:** Severe CAS is not frequent in coronary bypass surgery patients. There is no clear correlation between atherosclerotic risk factors or importance of CAD and severe CAS. Patients with symptomatic severe carotid stenosis are at high risk for peri-procedural stroke and might benefit from concomitant treatment, but the overall burden of carotid disease complications for CABG is low.

**Key words:** Carotid stenosis, carotid disease, CABG