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Address for Correspondence/Yazışma Adresi: Mehmet Yokuşoğlu, MD
Department of Cardiology, Gülhane Military Medical School, Ankara, Turkey
Phone: +90 312 304 42 67 Fax: + 90 312 304 42 50
E-mail: myokusoglu@yahoo.com

Utility of mild hypothermia during carotid artery surgery in patients with unilateral stenosis and contralateral total occlusion

Kontrateral total oklüzyonlu karotid arter stenozu olan olgularda hafif hipotermi ile karotid arter cerrahisi

Carotid artery occlusive disease is responsible for approximately 20% to 30% of strokes (1), and carotid endarterectomy (CEA) has been proven effective in reducing this risk of stroke in symptomatic and asymptomatic patients with >60% carotid stenosis (2, 3). Previous studies found that mild hypothermia could prevent neuronal ischemia and stroke during surgical procedures on arteries that supply the brain, especially with extended occlusive lesions on both internal carotid arteries (4). We aimed to determine whether mild hypothermia during carotid artery surgery improves outcomes in patients with unilateral critical stenosis in internal carotid artery or in common carotid artery and total occlusion on the contralateral side.

Between January 2003 and October 2007 seven patients (5 men, 2 women; mean age of 64±9 years) with 60-99% stenosis of the internal carotid artery (ICA) and total occlusion of the contralateral ICA and who were not candidates for or refused carotid balloon angioplasty and stent were included in the study. Exclusion criteria were: lesions that were inaccessible for technical reasons (e.g. high ICA cervical segment stenosis), uncorrected bleeding disorders, intracranial tumor or arteriovenous malformation, history of radiation therapy associated with radical neck dissections, congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD), recent transient ischemic attack (TIA), or stroke within the previous 6 weeks, and patients undergoing cardiac surgery with cardiopulmonary bypass within the previous 6 months.

After 100 unit/kg unfractionated heparin was given IV, and the aPTT was about 350-400 seconds, femoral artery and vein was cannulated. The patient was cooled down to 33°C and the Gott shunt was replaced by opening artery. In five patients, endarterectomy was performed on the internal carotid artery and the arteriotomy was closed primarily using continuous polydioxanone 5-0 sutures. In the other two patients, a same-side subclavian artery and common carotid artery bypass was performed with a 6 mm polytetrafluoroethylene synthetic graft. Later on, re-warming of the patient was begun and the subclavian anastomo-

sis was performed. After the patient body temperature reached 36°C, the patient was disconnected from the pump.

A major stroke occurred in one patient who experienced partial and secondary generalized seizures 43 hours after the operation. He was reintubated and antiepileptic therapy was initiated. A parietal infarct in the left middle cerebral artery territory on magnetic resonance imaging was seen, and clinically he developed a mild right hemiparesis. He was extubated 24 hours later, and his vital signs were back to normal 48 hours later. Patients were discharged from the hospital after seven days of hospital stay.

Carotid Doppler ultrasound performed on the three month postoperative visit showed a 20% restenosis of the ICA in one of five patients who underwent carotid endarterectomy and an open shunt graft in both patients with these grafts.

Mild hypothermia during carotid surgery for patients with a unilateral critical stenosis and contralateral total occlusion of the carotid arteries is safe and protects cerebral function in the early and late postoperative periods.

Haydar Yaşa, Levent Yılık, Kazım Ergüneş, Nagihan Karahan, Ufuk Yetkin, Çayan Çakır, Cengiz Özbek, Ali Gürbüç
Department of Cardiovascular Surgery, Atatürk Training and Research Hospital, İzmir, Turkey

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Address for Correspondence/Yazışma Adresi: Haydar Yaşa, MD
Department of Cardiovascular Surgery, Atatürk Training and Research Hospital, İzmir, Turkey
Phone: +90 232 244 44 44 Fax: +90 232 243 48 48 E-mail: hyasa20@yahoo.com

Mitral valve perforation: Is there a possible role for silent infective endocarditis?

Mitral kapak perforasyonu: Sessiz enfektif endokarditin olası bir rolü var mı?

Infective endocarditis is a main cause for mitral valve perforation (1), which otherwise rarely encountered in clinical practice. We present here an incidentally detected mitral valve perforation in an adult patient with undetermined cause.

A 36 years old male patient was referred to our clinic for a consultation request from gastroenterology clinic. He was admitted to hospital with dyspeptic symptoms and shortness of breath with exertion. According to his past medical history he experienced quick weight lose and fever three years ago. Diagnostic workup only yielded high 5-hydroxyindole acetic acid (5-HIAA) (71 mg/24 hours, upper limit of normal 20 mg/24 hours) and positive Indium pentetreotide (In-111) scanning test results at that time. However, explorative surgery and