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

Kontralateral 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), 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 and deep hypothermia. J Cardiovasc Surg 2000; 41: 299-302.

After 100 unit/kg unfractionated heparin was given IV, and the aPTT was about 350-400 seconds, femoral artery and vein was canullated. 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 with 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 re-intubated 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.

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

Mitrval kapak perforasyonu: Sessiz enfektif endokarditin olması 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