DOI:10.4274/tnd.26937
Turk J Neurol 2016;22:137-138

Cerebral Infarct due to Traumatic Carotid Artery Dissection

Travmatik Karotis Arter Diseksiyonuna Bağlı Gelişen Serebral Enfarkt

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Keywords: Traumatic dissection, carotid artery, trauma, dissection, cerebrovascular diseases
Anahtar Kelimeler: Travmatik diseksiyon, karotis arter, travma, diseksiyon, serebrovasküler hastalıklar

Introduction

A patient aged 48 years was admitted to our emergency department with right motor deficit and speech disorder. On neurologic examination, dysarthria, right hemiparesis, and right-side Babinski reflex were found. The patient's brain computerized tomography (CT) was normal. During hospitalization, he complained of neck pain spreading to the head and was questioned about trauma for the differential diagnosis of dissection. He had been attacked on the left side of his neck during a fight the day before. Twelve hours later, the patient's symptoms continued to increase and dizziness developed. Diffusion-weighted images revealed a hyper-intensity in the region of the left middle cerebral artery, accompanied by low apparent diffusion coefficient signals (Figure 1). Duplex ultrasound was performed and acute thrombosis and stenosis of the left carotid artery was demonstrated. CT angiography revealed thrombus and dissection of the left carotid artery in the neck (Figure 2A, B, C). Treatment was started with low-molecular-weight heparin followed by warfarin. The patient was prescribed warfarin, an oral anticoagulant, for at least 6 months because the radiologic and duplex ultrasound findings did not change or worsen.

Although conventional digital subtraction angiography is still the gold standard procedure, noninvasive methods are preferred to decrease the risk of stroke. Duplex ultrasound has limited ability and is the procedure of choice to follow-up the progression of dissection. CT and magnetic resonance angiography with a similar sensitivity and specificity can be used in the diagnosis of dissection (1,2).

In conclusion, internal carotid artery dissection is a potentially life-threatening condition and serious cause of stroke in young patients; therefore, early diagnosis is important.

Ethics

Peer-review: Externally peer-reviewed.

Authorship Contributions

Surgical and Medical Practices: Burcu Yüksel, Elif Uygur Küçükseymen, Concept: Burcu Yüksel, Ertan Karaçay, Design: Burcu Yüksel, Pınar Koç, Data Collection or Processing: Burcu Yüksel, Analysis or Interpretation: Burcu Yüksel, Eylem Özaydın Göksu, Literature Search: Burcu Yüksel, Aylin Yaman, Yasemin Biçer Gömceli, Writing: Burcu Yüksel.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.

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Received/Geliş Tarihi: 06.10.2015 **Accepted/Kabul Tarihi:** 13.03.2016

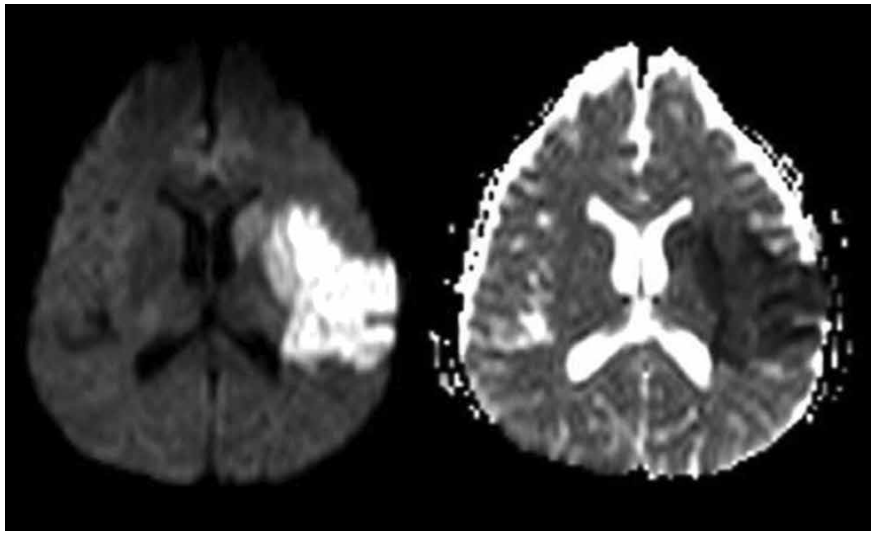

Figure 1. Restricted diffusion with increased diffusion-weighted imaging and low apparent diffusion coefficient signal in the left middle cerebral artery territory

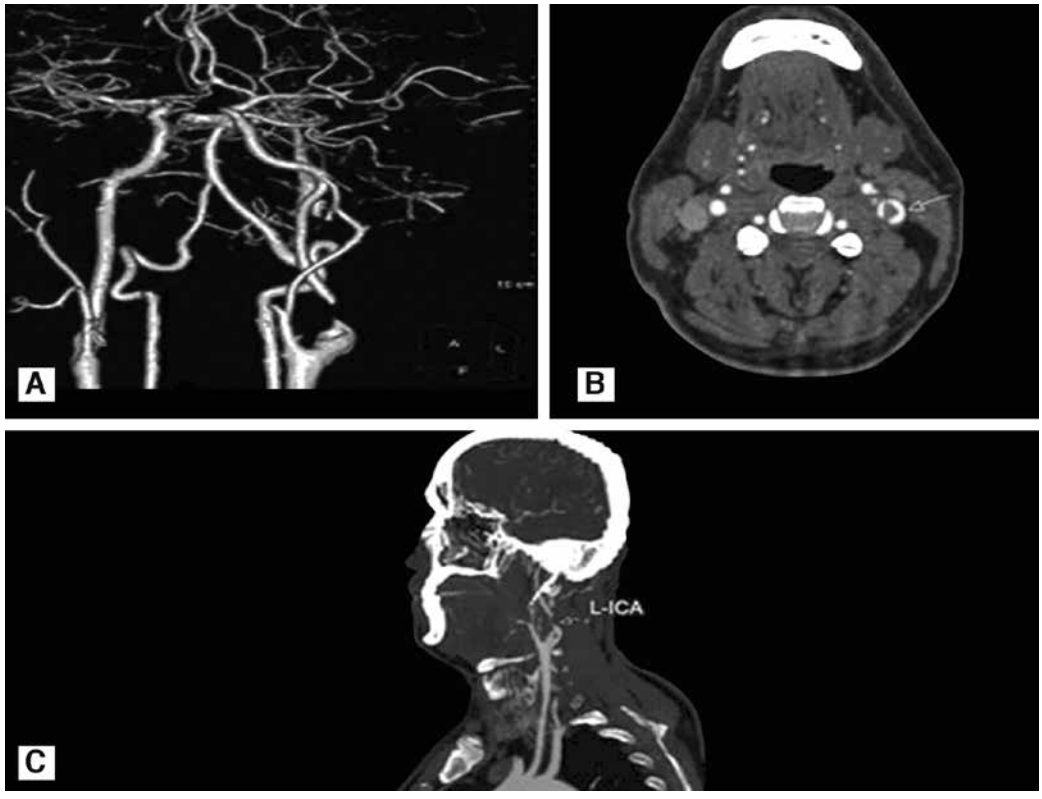

Figure 2. A) Dissection of the left internal carotid artery as shown by 3-dimensional computed tomography angiography, B) Intraluminal thrombus of the left internal carotid artery demonstrated on a transvers computed tomography-image (arrow), C) Sagittal reconstructed maximum intensity projection scan showed intraluminal thrombus of the left internal carotid artery (arrow)

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