

INTERNAL CAROTID ARTERY DISSECTION PRESENTING AS MULTIPLE CRANIAL NERVE PALSY

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Introduction

The clinical presentation of internal carotid artery (ICA) dissection is highly variable. An intense isolated unilateral pain in face and neck is sometimes the only clinical manifestation (1). Eventually a multiple combination of pain with omolateral episodes of amaurosis fugax or Horner's syndrome, and contralateral cerebrovascular disease (TIA or Stroke) is highly suggesting of extracranial internal carotid dissection (1). Lower cranial nerves palsy are rarely observed in patients with carotid dissection, especially as initial symptom (1). We report the case of a fifty years old woman who presented with combined IX , X , XII nerve palsy as initial symptom of ICA dissection.

Case Report

A 50-year-old woman, with Systemic Lupus Erythematosus acutely experienced pulsatile tinnitus in the left ear followed by breathy dysphonia. A trial of antibiotics prescribed by her general practitioner provided no relief of the symptoms. At the neurological examination, performed after five days, we found leftward deviation of the protruded tongue, rhinolalia and rightward deviation of the soft palate on phonation (Figure A). Fiberoptic laryngoscopic examination revealed a paresis of the left vocal cord (Figure B).

Head and neck contrast enhanced magnetic resonance imaging with time of flight sequences showed extracranial dissection of the left internal carotid artery (ICA), with delayed perfusion of the left hemisphere but no evidence of ischemic stroke (Figure C and D).

Conservative therapy with enoxaparin 6.000 UI twice a day was started with benefit. After two weeks, the patient reported a clinical improvement in swallowing function, which continued over following months. A CT angiography performed after two months showed a sharp reduction of wall thickening and compressive effect on cranial nerves. Six months after the patient's neurological examination was unremarkable and a CT angiography revealed normal flow within the left ICA.

Conclusion

Prompt recognition and early treatment of arterial carotid dissection can significantly improve the prognosis since the occurrence of stroke strongly influences the outcome (1).

The common presentations of extracranial ICA dissection are migraine with ipsilateral Horner's syndrome or delayed focal cerebral ischemic symptoms (stroke or transient ischemic attacks). Additional manifestations may occur but they are less frequent. Cranial nerves can be impaired because of mechanical compression or stretching of the nerves into the retropharyngeal space with frequencies ranging from 2% to 16% (2). However multiple cranial nerve palsy is rare affecting about 5% of patients with ICA dissection (2). A possible explanation is that, below the jugular foramen, in the retropharyngeal space, cranial nerves IX to XII are juxtaposed to the ICA, and cranial nerves X and XII have the longest anatomic relationship to this artery (2). The patient herein described developed IX, X and XII cranial nerves palsy as the only presenting symptom of ICA dissection.

There is no general consensus about the optimal therapeutic strategy of extracranial ICA dissection (3).

In our patient, the treatment with enoxaparin was efficacious and well tolerated, with complete reduction of the hematoma and the resulting compressive effect in six months.

In conclusion, the acute onset of glossopharyngeal neuralgia associated with deficit of the X and XII nerves should prompt to consider a diagnosis of internal carotid artery dissection even with no history of trauma or headache.

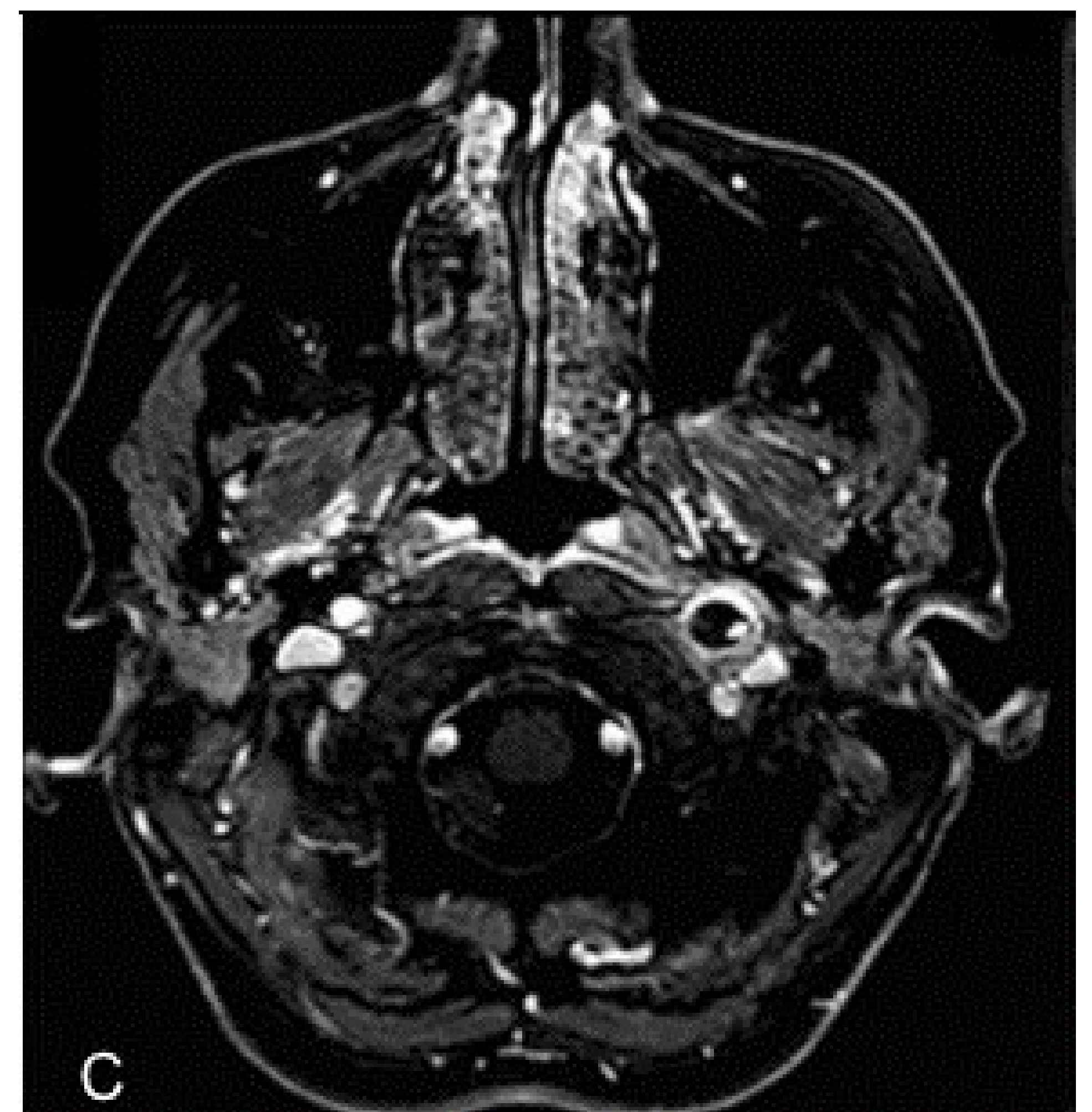
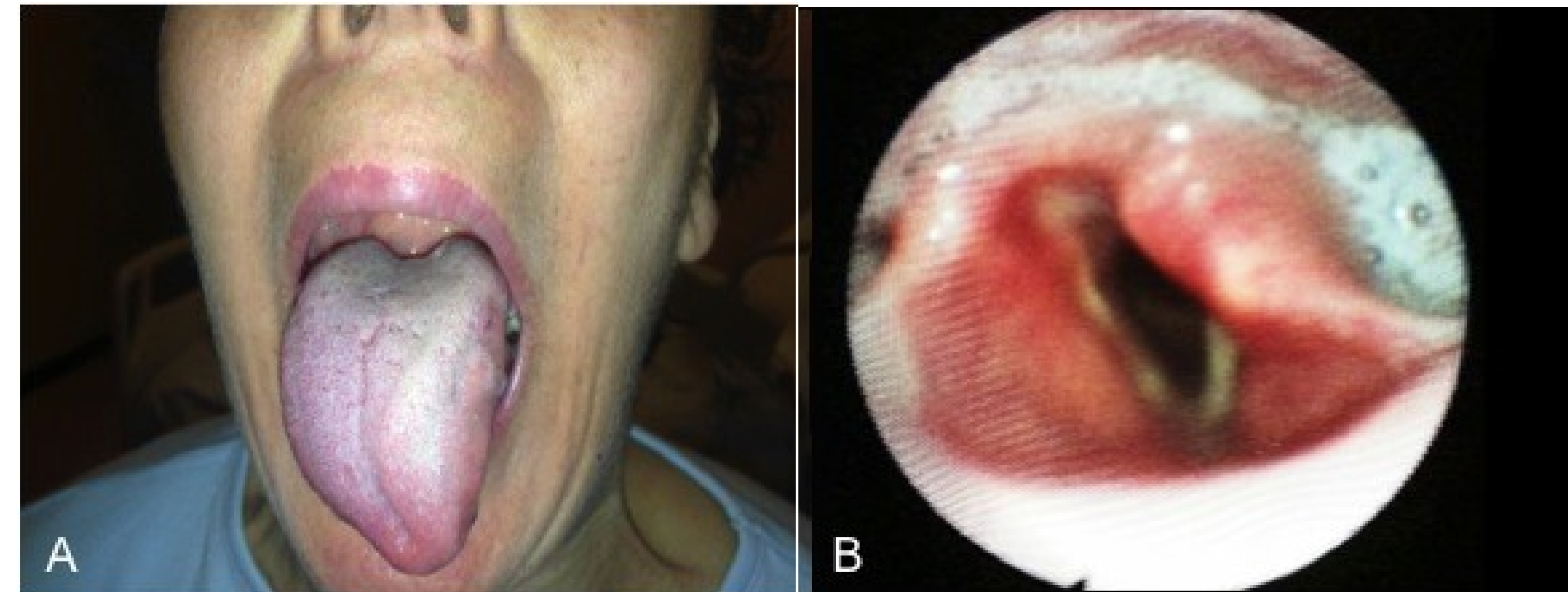


Figure legend

Patient's neurological signs and head and neck MRI. Patient's protruded tongue is deviated leftward (A) and a paresis of the left vocal cord is shown in a fiberoptic laryngoscopy image (B). Axial time-of-flight (TOF) MR angiography (MRA) shows a narrowed flow surrounded by a slightly hyperintense wall thickening of the left ICA (C) and coronal TOF MRA shows focal narrowing (arrow) with distal dilatation of the left ICA (D).

References

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