



LETTERS TO THE EDITOR

Eagle syndrome and carotid dissection

Síndrome de Eagle y disección carotídea

Dear Editor:

Eagle's syndrome (ES) is described as orofacial pain related to the elongation and calcification of the stylohyoid process¹. Eagle defined two clinical presentations: first, classic stylohyoid syndrome, in the form of cervicofacial pain accompanied by dysphagia and foreign body sensation, secondary to affection of lower cranial nerves, and second, stylocarotid syndrome, due to carotid artery compression, which may be associated with a neurological focus and even syncope². Different pathophysiological mechanisms have been proposed and the first type has even been related with amygdalectomy³. We report a case of Eagle's syndrome associated with carotid artery dissection.

The case in question is a 45-year-old woman, under immunosuppressive treatment due to ulcerative colitis, non-amygdalectomized, with a history of bilateral laterocervical pain episodes radiating to the orbital region, of several months duration. She attended consultation due to a sudden, intense pain episode with features similar to the usual, predominantly left-sided, in the context of neck rotation and forced extension. It was accompanied by right brachioradial hemiparesis, language alteration and self-limited clonic movements of the right lower limb.

Neuroimaging studies (computed tomography [CT] and cranial magnetic resonance imaging [MRI]) were initially normal, with the exception of an elongated, intensely calcified left styloid process. The vascular study (Doppler and angio-CT) showed an image indicative of left extracranial carotid dissection (fig. 1), with intramural haematoma, which was confirmed in the axial T1-T2 sequences of the cervical MRI. The 3D reconstruction revealed an intimate contact between the styloid process and the left carotid artery (fig. 2).

With this diagnosis, anticoagulant treatment was initiated upon the appearance of repeated episodes of amaurosis fugax in the left eye. At discharge, the carotid Doppler showed partial resolution of the dissection, and the patient was asymptomatic.

This treatment was maintained for 6 months, at which time the control angio-MRI showed complete resolution of the condition. The patient was also referred for maxillofacial surgery to assess surgical treatment, which was rejected due to clinical stability.



Figure 1 Magnetic resonance angiography of supra-aortic trunks: the image shows irregularity and reduced calibre in the postbulbar segment of the left internal carotid artery, indicative of dissection.

Approximately 4% of the population has an elongated styloid process (> 3 cm), although only 4 to 10.3% of them present symptoms⁴. Several cases of self-limiting neurological focus have been reported in the literature in patients with ES⁵⁻⁸, particularly in relation to head movements. Two of these were also associated with carotid artery dissection after forced and sustained head rotation^{7,8}, as in the case described. It seems possible to attribute a traumatic origin to the dissection.

In general, ES is suspected by symptoms and physical examination. Elongation and calcification of the styloid process is diagnosed through craniocervical radiograph and CT with 3D reconstruction, which shows if there is contact with adjacent structures⁹.



Figure 2 Cervical computed tomography angiography: 3D reconstruction showing intimate contact between the styloid process and the left internal carotid artery.

In cases where there is concomitant neurological focus, it is advisable to perform a Doppler or dynamic angiography, which shows the carotid deterioration induced by head movements. In our case, the ultrasound study made an early diagnosis of carotid dissection possible.

An elongated process can be treated by surgical excision, preferably through an extraoral approach¹⁰. As in spontaneous or non-traumatic carotid dissections, treatment should be anticoagulation unless it is contraindicated.

Our patient is an example that ES may occur as a complication of acute carotid dissection. When faced with cervicofacial pain related to a neurological focus, it is important to consider carotid deterioration due to an elongated styloid process.

Presentations

This work was partially presented as a poster at the LIX Annual Meeting of the Spanish Society of Neurology.

References

1. Eagle WW. Elongated styloid process. Report of two cases. *Arch Otolaryngol.* 1937;25:548-87.
2. Eagle WW. Symptomatic elongated styloid process. Report of two cases of styloid process-carotid artery syndrome with operation. *Arch Otolaryngol.* 1949;49:490-503.
3. Infante-Cossío P, García-Perla A, González-García A, Gil-Peralta A, Gutiérrez-Pérez JL. Compresión de la arteria carótida interna por una apófisis estiloides alargada. *Rev Neurol.* 2004;39:339-43.
4. Murtagh RD, Caracciolo JT, Fernandez G. CT findings associated with Eagle syndrome. *AJNR Am J Neuroradiol.* 2001;22:1401-2.
5. Farhat HJ, Elhamady MS, Ziaee H, Aziz-Sultan MA, Heros RC. Eagle syndrome as a cause of transient ischemic attacks. *J Neurosurg.* 2009;110:90-3.
6. Chuang WC, Short JH, McKinney AM, Anker L, Knoll B, McKinney ZJ. Reversible left hemispheric ischemia secondary to carotid compression in Eagle syndrome: Surgical and CT angiographic correlation. *AJNR Am J Neuroradiol.* 2007;28:143-5.
7. Zuber M, Meder JF, Mas JL. Carotid artery dissection due to elongated styloid process. *Neurology.* 1999;53:1886-7.
8. Karam C, Koussa S. Syndrome de Eagle: apport du scanner avec reconstructions 3D. *J Neuroradiol.* 2007;34:344-8.
9. Savranlar A, Uzun L, Ugur MB, Özer T. Three-dimensional CT of Eagle's syndrome. *Diagn Interv Radiol.* 2005;11:206-9.
10. Kim E, Hansen K, Frizzi J. Eagle syndrome: Case report and review of the literature. *Ear Nose Throat J.* 2008;87:631-3.

L.M. Cano*, P. Cardona and F. Rubio

Servicio de Neurología, Hospital de Bellvitge, L'Hospitalet de Llobregat, Barcelona, Spain

*Corresponding author

E-mail: lcano@bellvitgehospital.cat (L.M. Cano).

Bilateral optic neuropathy in an HIV patient

Neuropatía óptica bilateral en un paciente con infección por el VIH

Dear Editor:

The differential diagnosis of vision loss in a patient infected with human immunodeficiency virus (HIV) is extensive; it covers a variety of processes affecting from the cornea to the visual cortex. Both antiretroviral medication and that used to treat opportunistic infections have increased survival of patients with HIV, but they are significantly toxic¹. Most cases of optic neuritis in patients with HIV

infection are usually caused by opportunistic infections, such as cryptococcosis, histoplasmosis, herpes zoster, cytomegalovirus and syphilis². Some cases of primary central nervous system lymphoma have also been described³.

Case report: 34-year-old male diagnosed 5 years earlier with HIV infection, currently with an acceptable immune status (369 CD4+ and HIV RNA viral load of 690 copies/ml). In treatment with antiretroviral therapy for 4 years; in the last 18 months, the procedure followed was zidovudine 300 mg/12 h, lamivudine 150 mg/12 h, lopinavir 400 mg/12 h and ritonavir 100 mg/12 h. He had presented pneumonia from *Pneumocystis carinii* at the time of diagnosis, but since then had not suffered any other opportunistic infection and did not follow preventive treatment. He had used multiple toxic substances: cocaine, heroin, cannabis, tobacco and benzodiazepines, which he had stopped 3 years