
Life-threatening pseudoaneurysm of the facial artery after dental extraction: successful treatment with emergent endovascular embolization

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Vascular complications after third molar extraction are very rare but may cause a life-threatening situation. The case presented is that of a 25-year-old male who appeared at our emergency department with severe dyspnea and increasing swelling of the left submandibular area 3 days after dental extraction. CT angiography and digital subtraction angiography demonstrated a pseudoaneurysm of the facial artery. Subsequent emergent endovascular embolization with n-Butyl-2-Cyanoacrylate was performed and the patient had a rapid satisfactory resolution. (**Oral Surg Oral Med Oral Pathol Oral Radiol Endod** 2008;106:129-32)

Vascular complications after dental extractions are very rare, but they can cause a life-threatening situation.^{1,2} The facial artery wall may be damaged when the neurovascular bundle is exposed during surgical removal of impacted lower third molars, and pseudoaneurysms may develop as the effused blood is retained by the surrounding tissues.³

Emergent neurointerventional radiology plays a key role in the management of traumatic vascular lesions of the head and neck as it provides a minimally invasive and effective treatment.^{4,5} To the best of our knowledge, this article reports the first case of pseudoaneurysm of the facial artery after third mandibular molar extraction and in addition with satisfactory emergent endovascular treatment.

CASE REPORT

A 25-year-old man came to the emergency department of our hospital 3 days after extraction of the lower left third mandibular molar. He had a growing, pulsating

swelling of the floor of the mouth, which was not painful, with dysphagia and severe respiratory restriction and left lingual anesthesia. A computed tomography (CT) angiography was performed with intravenous iodinated contrast injection. It showed a 2-cm space-occupying lesion in the floor of the mouth filled with contrast enhancement with displacement of the oropharyngeal space, which suggested a pseudoaneurysm of the facial artery with surrounding hematoma (Fig. 1, A and B).

Under local anesthesia, a transfemoral artery approach was used and a 5F platform catheter was placed within the left external carotid artery. It confirmed the diagnosis suggested with CT, depicting a pseudoaneurysm dependent on a proximal branch of the left facial artery (Fig. 2, A and B). Subsequently, selective cannulization of the left facial artery was achieved and the microcatheter was wedged within the neck of the pseudoaneurysm located at a proximal branch of the left facial artery; a 2:1 mixture of iodized oil (Lipiodol ultrafluide; Laboratoire Guerbet, Roissy, France) and n-Butyl-2-Cyanoacrylate-Histoacryl (2-NBCA; Histoacryl, Braun, Tuttlingen, Germany) was injected through the microcatheter. The pseudoaneurysm and the adjacent parent artery connected to it were completely occluded and the microcatheter was quickly withdrawn under aspiration. A control left external carotid artery angiogram demonstrated complete embolization of the aneurysm with only a minor filling defect in the facial artery. No clinical or imaging complications were detected and the procedure was free of cerebral complications.

The patient had a rapid and satisfactory clinical evolution with evident respiratory improvement in

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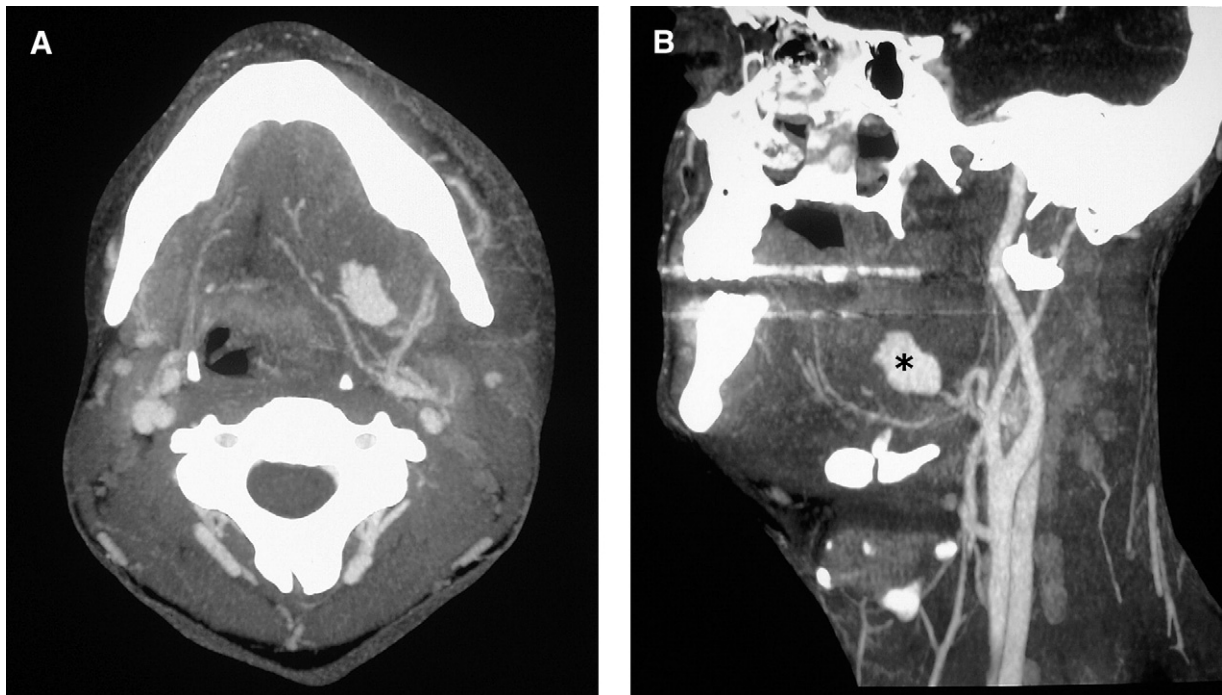


Fig. 1. CT angiogram and 3D volume-rendered reconstructions in a 25-year-old man after dental extraction. Axial MIP image (A) and 3D volume-rendered reconstruction (B) show pseudoaneurysm (*) emanating from left facial artery. Note also displacement of the airway due to the pseudaneurysm and the surrounding hematoma.

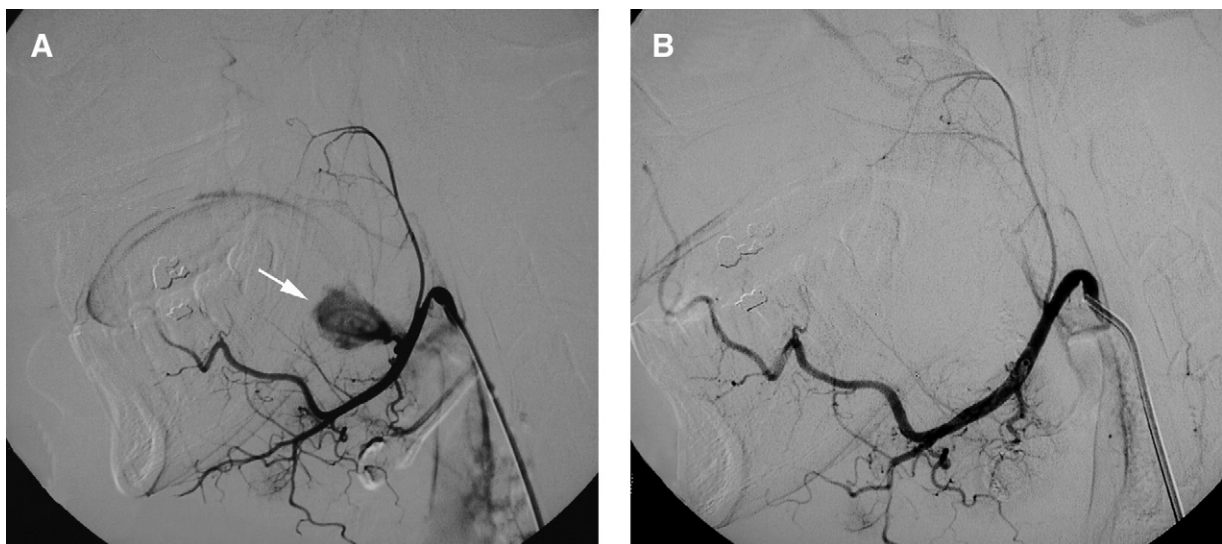


Fig. 2. Selective digital angiograms of the left external carotid artery, with a lateral view. A, A pseudoaneurysm in a proximal branch of the left proximal facial artery can be seen (white arrow). B, Postembolization selective angiogram shows complete occlusion of the pseudoaneurysm formation with a minor filling defect in distal facial artery.

subsequent hours and swelling gradually subsided; he was discharged 2 days afterwards. Follow-up CT performed 15 days later showed complete resolution

of the hematoma and pseudoaneurysm, only depicting hyperdense foci related to the embolization material. The patient was followed for 12 months with

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