

Ruptured internal carotid artery aneurysm presenting with bloody otorrhoea and epistaxis as a result of ear syringing

To the Editor: We would like to record an unusual presentation of rupture of an internal carotid artery (ICA) aneurysm with carotido-tympanic leak presenting as a middle ear mass, profuse bloody otorrhoea and anterior and posterior epistaxis, resulting from the minor trauma of ear syringing for impacted wax. This is a rare major complication from a very minor procedure.

A 32-year-old man with wax impaction was treated with routine syringing. A few hours later, he presented as an emergency with profuse bleeding from the right ear and massive epistaxis which was very difficult to control. The haemoglobin concentration dropped to <6 g/dl, requiring several blood transfusions. Radiological investigations (magnetic resonance angiography (MRA), computed tomography (CT) and angiogram) revealed a 6 cm × 4 cm right proximal petrous (carotido-tympanic) internal carotid pseudo-aneurysm eroding the right petrous-mastoid bone, carotid canal, middle ear cavity and mastoid air cells. It is of note that the patient was HIV-negative. The aneurysm was successfully treated with a coated coronary stent; 18 months later, the patient was well.

Aneurysms of the petrous part of the ICA are rare.¹ They are thought to arise because of developmental weaknesses in the arterial wall of the sites of origin of regressed embryonic arteries including the carotido-tympanic, pterygoid, vidian and stapedia arteries or the hyoid vessel. Histologically, there is degeneration of the internal elastic lamina and medial aplasia, as in intracranial berry aneurysms.^{1,2} The carotido-

tympanic artery, a vestige of the embryonic hyoid artery, is a small branch that arises near the genu of the petrous ICA and passes superiorly through the stapes to supply the middle ear cavity.¹ The true incidence of carotido-tympanic petrous internal carotid aneurysm is not reflected in the literature but may account for 25% of extracranial ICA aneurysms.² Most are congenital, but trauma and infections have been implicated.³ In addition, iatrogenic injury during myringotomy and temporal bone surgery has been reported.^{1,2}

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