Aneurysm of Extracranial Internal Carotid Artery

Gouranga Santra*; Narayan Pandit**

A nine year-old boy presented with pulsatile swelling near right angle of mandible (Fig. 1) for last two years. He had no history of fever, neck pain, dysphagia, hoarseness of voice, headache and otalgia. He had no history of myalgia, arthralgia, arthritis, oral ulcers, red eyes and skin rashes. History of tuberculosis, neck trauma and sudden onset neurodeficits were absent. He had occasional history of upper respiratory tract infections. He was born of normal vaginal delivery. His past and family histories were unremarkable. He had no radiation exposure. On oral cavity inspection right pharyngeal wall was deviated medially (Fig. 2). He was misdiagnosed previously to have parotid swelling or enlarged tonsil. He had no anaemia, cyanosis, jaundice, clubbing and lymphadenopathy. All peripheral pulses were normal and palpable. Blood pressure and respiration were normal. Marfanoid features were absent. Other systemic examinations were normal. Complete blood count including ESR, lipid profile, chest x-ray, ECG and echocardiography were normal. CT scan of neck showed enhancing aneurysm with thrombus within the lumen of extracranial portion of internal carotid artery (Fig. 3). Colour Doppler study confirmed the aneurysm (Fig. 4).

Aneurysms of extracranial portion of the internal carotid artery (AEICA) are rare, particularly in young patients. They usually develop from trauma or infection. Fibromuscular dysplasia, collagen tissue disorders, Takayasu arteritis, irradiation, Behcet’s disease or congenital defects are other rare causes. Aneurysms of atherosclerotic origin are mostly seen over the age of 50 years. A pulsatile neck swelling is the commonest presentation. Other symptoms include neck pain, stroke or TIAs. Although the typical location is below the angle of mandible, it may progress to throat and cause dysphagia due to pressure on pharyngeal muscles.1 Horner syndrome can develop due to compression on cervical sympathetic ganglia and hoarseness can be seen due to vagus nerve compression. Differential diagnoses include cervical lymphadenopathy, tortuous carotid artery, carotid body tumour and cervical abscess. Thrombosed aneurysms may be confused with tumours or parapharyngeal abscesses. The diagnosis of carotid artery aneurysm can be confirmed by duplex ultrasound or contrast CT, but MR angiography or arteriography is necessary in planning the surgical strategy. Carotid artery aneurysm is associated with catastrophic complications like rupture, thrombosis or embolism and demands early recognition and prompt operative intervention. The treatment is partial resection with primary end-end anastomosis of the two ends of the internal carotid artery. Complete excision of the aneurysm is not recommended for high incidence of cranial nerve injuries.2 Primary anastomosis of the two ends of the internal carotid artery is preferred but in the event of insufficient length of artery, an interposition graft becomes necessary. For the ability to empty the thrombus and remove the mass effect via excision of aneurysm, surgical therapy is preferred. Endovascular treatment may be used only if there is contraindication to surgical therapy.

References


*RMO-cum Clinical Tutor, Department of Medicine, Medical College, 88, College Street. Kolkata-700073; **Assistant Professor, Radiodiagnosis, North Bengal Medical College, Sushrutanagar, Darjeeling 734012, West Bengal
Received: 7.6.2008; Revised: 11.7.2008; Accepted: 6.2.2009