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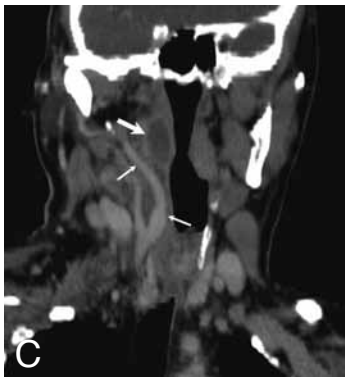
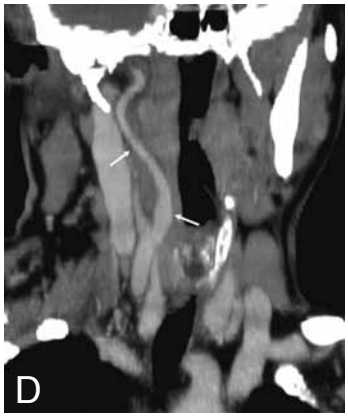
IMAGES IN CLINICAL RADIOLOGY





Aberrant retropharyngeal internal carotid artery associated with retropharyngeal abscess: determination of a safe drainage zone with computed tomography

B. Battal[1], B. Karaman[1], S. Akay[1], M. Tasar[1]

A 60-year-old woman visited the Ear Nose and Throat (ENT) department of our hospital complaining of sore throat that persisted since 2 weeks. She was prescribed oral antibiotherapy, during which she experienced dysphagia and increasing fever. After physical reexamination and endoscopic study, a retropharyngeal abscess was detected and was thought to be due to the bulging of the right posterior pharyngeal wall that has smooth and intact mucosa. Thus, the patient was forwarded to the radiology department for enhanced neck computed tomography (CT) to confirm the diagnosis. On the multidetector neck CT scan, we observed an abscess formation (thick white arrow) with peripheral contrast enhancement, and enlargement of the right retropharyngeal space was also seen (Fig. A). In addition, the CT images also displayed an aberrant course of the right internal carotid artery (ICA) (thin white arrows) that was very close to the right posteromedial wall of the pharynx and contributed to the enlargement of the retropharyngeal space (Fig. B, C).

After obtaining detailed anatomical information from the CT examination, abscess drainage from the right superolateral wall of the nasopharynx was performed at the ENT department. No hemorrhagic or other complications were encountered. On control CT examination performed 20 days after drainage, no abscess formation was seen (Fig. D).

Comment

Aberrant retropharyngeal ICA, also described as ICA transposition or tortuous ICA is a rare cause of retropharyngeal space pulsatile pseudotumor and retropharyngeal space enlargement. Medial dislocation of the ICA into the retropharyngeal space at the level of the posterior pharynx is one of the more commonly described carotid anomalies in the medical literature, and its typical presentation on physical examination is a pulsating submucosal mass along the posterior wall of the pharynx. In elderly patients, the incidence of aberrant course of the ICA has been estimated to be as high as 2%. Symptomatic patients may present with complaints of dysphagia, abnormal voice, or foreign body sensation at the posterior end of the pharynx. Occasionally, this anomaly may be misdiagnosed as a unilateral tonsillitis, peritonsillar abscess, or parapharyngeal neoplasm.

Identifying the aberrant course of the ICA is important in surgical and interventional procedures for retropharyngeal spaces. During surgical, interventional procedures and anesthesia-related actions, awareness of the aberrant course of the ICA may prevent vascular damage and massive hemorrhage. It is especially dangerous when the artery comes in contact the tonsillar fossa or the posterior wall of the pharynx, as in our patient. Such incidents may result in massive hemorrhage during tonsillectomy, uvulo-palato-pharyngoplasty, or incision and drainage of a peritonsillar abscess.

Detection of this rare aberrant course of the ICA is very important, especially in patients who are candidates for surgeries of the pharynx or drainage of retropharyngeal abscesses. Imaging studies can show and confirm the aberrant course of the ICA, thereby reducing the risk of hemorrhagic complications.

1. Department of Radiology, Gulhane Military Medical School, Ankara, Turkey.