۳۰ درصد تخفیف نوروزی ویژه کارگاه‌ها و فیلم‌های آموزشی

اصول تنظیم قرارداد

پروپوزال نویسی

آموزش مهارت های کاربردی در ندوین و چاپ مقاله
A 41-year-old female complaining of an eight month history of dysphagia from 8 months ago presented to the Otolaryngology Department at Loghman Hakim Hospital, Shaheed Beheshti University of Medical Sciences, Tehran, Iran. There was no history of any current infections of the upper respiratory tract, dental problems, and inflammations of the oral cavity, oropharynx, salivary glands, nose, or paranasal sinuses. There was no pain, malaise, fever, or weight loss.

Upon physical examination, she had a bulging area in the left lateral oropharyngeal wall which pushed the palatine tonsil and its pillars to midline (Figure 1). A slight fullness behind the left angle and ramus of the left mandible was noted. There was no pulsation or bruits at the site of the mass. No other mass or lymphadenopathy was found in

Figure 1. Showing a bulging at the lateral pharyngeal wall and tonsillar pillar (arrows)

Figure 2. CT scan of the neck demonstrating an enhanced left parapharyngeal mass

Figure 3. Digital subtracted angiogram showing a mass above the left carotid bifurcation
the neck. Laboratory tests including CBC, ESR, and PPD were normal and toxoplasma and HIV serologic tests were negative. A chest radiography revealed no abnormality.

Contrast axial CT scan of the neck revealed a deeply enhancing mass located in the left parapharyngeal space, adjacent to the great vessels of the neck. Other areas of the neck were normal (Figure 2).

The patient underwent cervical vessel digital subtraction angiography (DSA) which showed a vascular mass with multiple nutrient vessels mainly originating from the external carotid (ascending pharyngeal branch) and a few smaller branches from the internal carotid artery (Figure 3). Surgery was performed to remove the mass.

What is Your Diagnosis?

See the pages 59 – 60 for the diagnosis.
The patient was diagnosed with a vagus nerve paraganglioma (glomus vagale). Paragangliomas are the most common benign vascular neoplasm of the neck. Paragangliomas arise from extra-adrenal paraganglionic cells which are derived from the neural crest. The paraganglionic system consists of a collection of neuroectoderm-derived chromaffin cells in extra-adrenal sites. Before adrenal medulla formation in the fetus, the paraganglionic system is a major source of catecholamines.

The correct terminology of paragangliomas is based on their location. They are classified as carotid paragangliomas, jugulotympanic paragangliomas and vagal paragangliomas. Approximately 90% of tumors arising from the paraganglion system are pheochromocytomas of the adrenal medulla; the remaining 10% arise from extraadrenal sites with 85% originating in the abdomen, 12% in the thorax, and the remaining 3% in the head and neck area. The most common paraganglioma of the head and neck is the carotid body tumor, followed by jugulotympanic paragangliomas and vagal paragangliomas.

Vagal paragangliomas are tumors derived from paraganglionic tissue associated with one ganglia of the vagus nerve. They most commonly arise from nodose or inferior vagal ganglion. Tumors arising from the superior vagal ganglion, or jugular ganglion, may be dumbbell-shaped and may extend intracranially through the jugular foramen.

The etiology of paragangliomas appears to be multifactorial. Most paragangliomas are solitary...
but multiple pheochromocytomas and paragangliomas are seen in familial syndromes, especially multiple endocrine neoplasia types II (MEN II).4

Vagal paraganglioma usually presents as a palpable neck mass that is more mobile in a lateral direction than a craniocaudal orientation. Paralysis of the ipsilateral true vocal cord or Horner's syndrome, from involvement of the ipsilateral sympathetic chain, may be present as the tumor grows in size. True vocal cord paralysis can result in hoarseness. Large tumors arising from the jugular ganglion may be associated with cranial neuropathies of the lower cranial nerves. Diagnostic imaging, especially CT scanning with intravenous contrast, may demonstrate a hypervascular mass located above the carotid bifurcation with anterior displacement of the carotid artery from the tumor present in the posterior carotid sheath. The internal and external carotid arteries do not manifest a splayed configuration. Embolization is indicated for large tumors and in those rare instances where a malignant tumor may be suspected.4,5

The treatment of choice is surgical removal with meticulous extra-capsular dissection. An experienced vascular surgeon and appropriate instrumentation are needed.6

In our patient, surgery was performed to remove the mass. It was a well encapsulated yellowish mass measuring 5×5 cm in diameter located lateral and adherent to the left hypoglossal nerve. There was a major nutrient artery from the ascending pharyngeal branch of the left external carotid artery and a few smaller vessels extending from the left internal and external carotid artery that were all ligated (Figure 4).

On histopathologic examination, the tumor consists of two cell types. The majority of cells are Type I, where they are arranged in a specific pattern which is called Zellballen. Type II cells surround Type I cells. Nuclear pleomorphism and cellular hyperchromatism are not considered as evidences of malignancy (Figure 5).7

References

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