

## Presentation and surgical outcome of carotid body tumors in Upper Egypt: A retrospective study

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### Abstract

#### Background and aims:

Carotid body tumors (CBTs) are rare, hypervascular neoplasms and are usually located at the carotid artery bifurcation. However, surgery is the gold standard for curative treatment of CBTs it carries a high risk of mortality and morbidity. The aim of this study was to find out the pattern of presentation of CBTs in our locality and to evaluate the outcome of their surgical treatment.

#### Materials and methods:

A retrospective group of patients that presented with CBTs and subjected to surgical resection in the period from May 2006 to April 2011 were included in this study. All cases were evaluated clinically, radiologically before surgical treatment and diagnosis confirmed with postoperative histopathology. Surgical outcome was recorded.

#### Results:

A total of 16 patients were presented in the study period and only 12 of them were subjected to surgical excision and they were 7 women and 5 men and their age ranged from 33 to 65 years (mean  $46 \pm 13$ ). Six patients with Shamblin group I and II, subadventitial tumor excision was performed after ligation of the feeding vessels of the tumor and 3 of them were in need for ligation of the external carotid artery (ECA) and primary vascular repair of the internal carotid artery (ICA) was needed in another patient. The remaining 6 patients with Shamblin group III, ECA ligation was done in 5 patients, primary vascular repair of the ICA was needed in 3 patients and ICA reconstruction by saphenous vein graft in one patient. Postoperative hemiparesis occurred in 2 patients with Shamblin III, one of them improved in 3 months after surgery. Postoperative cranial nerve deficits occurred in 3 patients (2 cases with Shamblin III and one case with Shamblin II), 2 of them with transient hypoglossal paresis and the remaining one developed hoarseness of voice due to permanent vocal cord paralysis. There was no recurrences in the follow up period.

#### Conclusions:

Patients with CBTs in our locality are usually presented with an advanced stage. Early diagnosis and surgical resection of these tumors will minimize the morbidity and carry good surgical outcome. A team approach including head and neck and vascular surgeons are essential to achieve good surgical results.

**Keywords:** Carotid body, paragangliomas, carotid repair