

Original Article

Horner's Syndrome: Unusual Complication after Head and Neck Tumors Surgery

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ABSTRACT

Objective: To describes uncommon cases of Horner's syndrome after Head and neck tumors surgery.

Patients and Methods: A total of 51 patients underwent surgery for head and neck tumors from January 2007 to August 2007. Clinical parameters, neurological sequel and other complications were evaluated in all cases and those developing Horner's Syndrome were studied.

Results: Of the 51 patients, 5 (9.8%) developed postoperative Horner's syndrome .Their mean age of study subjects was 54.74 ± 18.08 years (range 16- 80). The first case is that of a 71 -year-old female with a history of laryngeal carcinoma complicated by Horner's syndrome. The second patient is a man who presented with Hypopharyngeal carcinoma. The third case involved a woman with total thyroidectomy for papillary thyroid carcinoma. The four and fifth cases were complications of radical neck dissection.

Conclusion: Post operative Horner's Syndrome is an uncommon complication of head and neck surgery. Old age and tumor size were risk factors in our study. (Rawal Med J 2009;34:17-18).

Key Words: Sympathetic chain, Horner's syndrome, head and Neck tumor.

INTRODUCTION

Horner's syndrome, or oculosympathoparesis, first described by Johann Friedrich Horner in 1822 is characterized by the classic triad of ipsilateral partial ptosis, papillary miosis and ipsilateral facial anhidrosis.¹⁻³ Understanding of Post-operative Horner's Syndrome may help the surgeon to make a better differential diagnosis in trauma patients in whom prompt diagnosis is critical to establish the correct treatment.^{4,5} Horner's syndrome may also present as a sequel of cervical sympathetic denervation.^{6,7} In thorascopic sympathectomy, patients should be warned of this complication.⁸ Carotid dissection should be suspected in patients with Horner's syndrome, particularly if head or neck pain is present.^{9,10} This article describes uncommon cases of Horner's syndrome after Head and neck tumors surgery.

MATERIAL AND METHODS

A retrospective study was carried out to assess the incidence and factors associated with neurological complications in patients who underwent head and neck tumor surgery. Fifty-one head and neck cancer patients operated from January 2007 to August 2007 were included in this study. Clinical parameters, neurological sequel and other complications were evaluated in all cases during a mean follow up period of 17 months. All surgeries were performed under general anesthesia.

RESULTS

Out of 51 patients, there were 34 males and 17 females with mean age of 54.74 ± 18.08 years (range 16-80). These included 10 patients with hypopharyngeal carcinoma, 11 with laryngeal carcinoma, 10 with oral cancer, 10 patients with supraglottic laryngeal cancer and 10 with neck tumor. All patients who developed Horner's syndrome had ptosis, miosis, anhidrosis of the face, anisocoria, intermittent orbital pain; best-corrected vision was 20/20 and normal intraocular pressure in the first post operative week. Paralysis of the 11th nerve occurred in one case. A lesion of the 10th cranial nerve was observed in 4 cases.

Horner's syndrome and hypoglossal nerve paralysis were noted in five (9.8 %) patients. Old age and tumor size were risk factors which could predict this condition. The post-operative period was uneventful and all recovered well after the operation. On review at 6 months following surgery, their scars were maturing satisfactorily but the Horner's syndrome was persistent.

DISCUSSION

Acquired Horner's syndrome, due to sympathetic denervation, has been associated with peripheral autonomic denervation due to trauma, anesthesia and tumours.¹⁻³ Postganglionic fibers also project more proximally from the satellite ganglion, located more inferiorly just anterior to the C7 vertebrae, to innervate the upper arm.⁴⁻⁷ In our series of 5 consecutive cases of postoperative Horner's syndrome presenting in patients above 18 year of age, investigation with palpable masses in the neck, CT, or MRI of the chest and neck revealed only two cases with laryngeal carcinoma and Hypopharyngeal cancer. Surgical trauma was the most common identifiable cause in these cases.

Localization of the Horner's syndrome to the pre- or postganglionic neuron by pharmacological testing of pupils is useful in adult as it provides prognostic information as well as directing the physician to further areas of investigation.⁸⁻¹⁰ Iatrogenic causes of Horner's syndrome include chest tube placement, coronary artery bypass surgery and any neck surgery.⁸ A tumor from the apex of the lung (Pancoast syndrome) and mediastinal tumors can impinge on the second order sympathetic neurons. Carotid artery dissection may be an important cause of postganglionic Horner's syndrome.¹⁰ Oculosympathoparesis occurs in approximately half the cases. Branches of the external carotid artery provides the blood supply for the superior cervical ganglion, and branches of the internal carotid artery supply the carotid plexus. In conclusion, we noted nearly 10% cases of Post-operative Horner's syndrome. The surgeon should be alert of this possible complication in head and neck tumor surgery.

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