

Unusual presentation of more common disease/injury

An unusual cause of hoarseness

Hussam Ammar,¹ Ragai Fouda²¹Department of Internal Medicine, University of Texas, Health Science Center at Houston, Houston, Texas, USA;²Department of Internal Medicine, Kasr Elaini Hospital, Cairo, Egypt**Correspondence to** Dr Hussam Ammar, hussam.m.ammar@uth.tmc.edu**Summary**

A 55-year-old man had a 3 month history of hoarseness and choking when he drinks liquids. Physical examination revealed evidence of left sided palsy of 9th, 10th, 11th and 12th cranial nerves. A brain MRI revealed a skull base lytic lesion. The authors diagnosed Collet–Sicard syndrome. The patient was found to have colon cancer. He received palliative skull radiotherapy and died few weeks later in hospice care.

BACKGROUND

Skull base tumours are rare causes of hoarseness.^{1–3} The axons of recurrent laryngeal nerve which supplies the laryngeal muscles are grouped within the vagus nerves. The vagus, glossopharyngeal and accessory nerves leaves the skull also through the jugular foramen.^{3 4} Collet–Sicard syndrome (CSS) is a rare syndrome that involves palsy of 9th, 10th, 11th and 12th cranial nerves secondary to skull base pathology.⁵ It was described in cases of skull base tumors, trauma and aneurysms. This is the first reported case of colon cancer to present as CSS.

CASE PRESENTATION

A 55-year-old man with no significant medical history had a 3 month history of hoarseness. On physical examination, there was evidence of left-sided palsy of 9th, 10th, 11th and 12th cranial nerves. On further questioning, he admitted that he chokes when he drinks liquids. The haemoglobin was 13 g/l and prostate-surface antigen was 1.5 ng/ml.

INVESTIGATIONS

A direct fiberoptic laryngoscopy showed left vocal cord paralysis. A neck and chest CT was unremarkable.

A MRI and a bone scan revealed lytic lesion extending from left petrous bone apex to the occipital condyle (figures 1 and 2).

An abdominal CT showed a colonic mass and multiple hepatic metastasis. The biopsy confirmed the diagnosis of colon cancer.

OUTCOME AND FOLLOW-UP

Our patient died in hospice care after few sessions of palliative skull radiotherapy.

DISCUSSION

Hoarseness is a symptom, not a diagnosis. It has wide range of causes, including irritants (eg, alcohol, tobacco, inhaled steroids and gastro-oesophageal reflux), infections, allergy, systemic disorders, vocal cord trauma and overuse, tumours, neuromuscular, psychiatric causes



Figure 1 Brain MRI revealed an ill-defined heterogenous lesion extending from left petrous apex to the occipital condyle.

and recurrent laryngeal nerve paralysis.^{1–3} The recurrent laryngeal nerve supplies all the laryngeal muscles except the cricothyroid which is innervated by the superior laryngeal nerve.^{2 4} The axons of recurrent laryngeal nerve are grouped within the vagus nerves which leaves the skull through the jugular foramen. Skull base tumours do not cause isolated hoarseness of voice as the motor fibres of the vagus nerves innervating the palate, pharynx and larynx are usually damaged by the tumour. The nearby cranial nerves can be also damaged as the glossopharyngeal and spinal accessory nerves leaves the skull with the vagus nerve through the jugular foramen while the hypoglossal nerve leaves the skull through the nearby

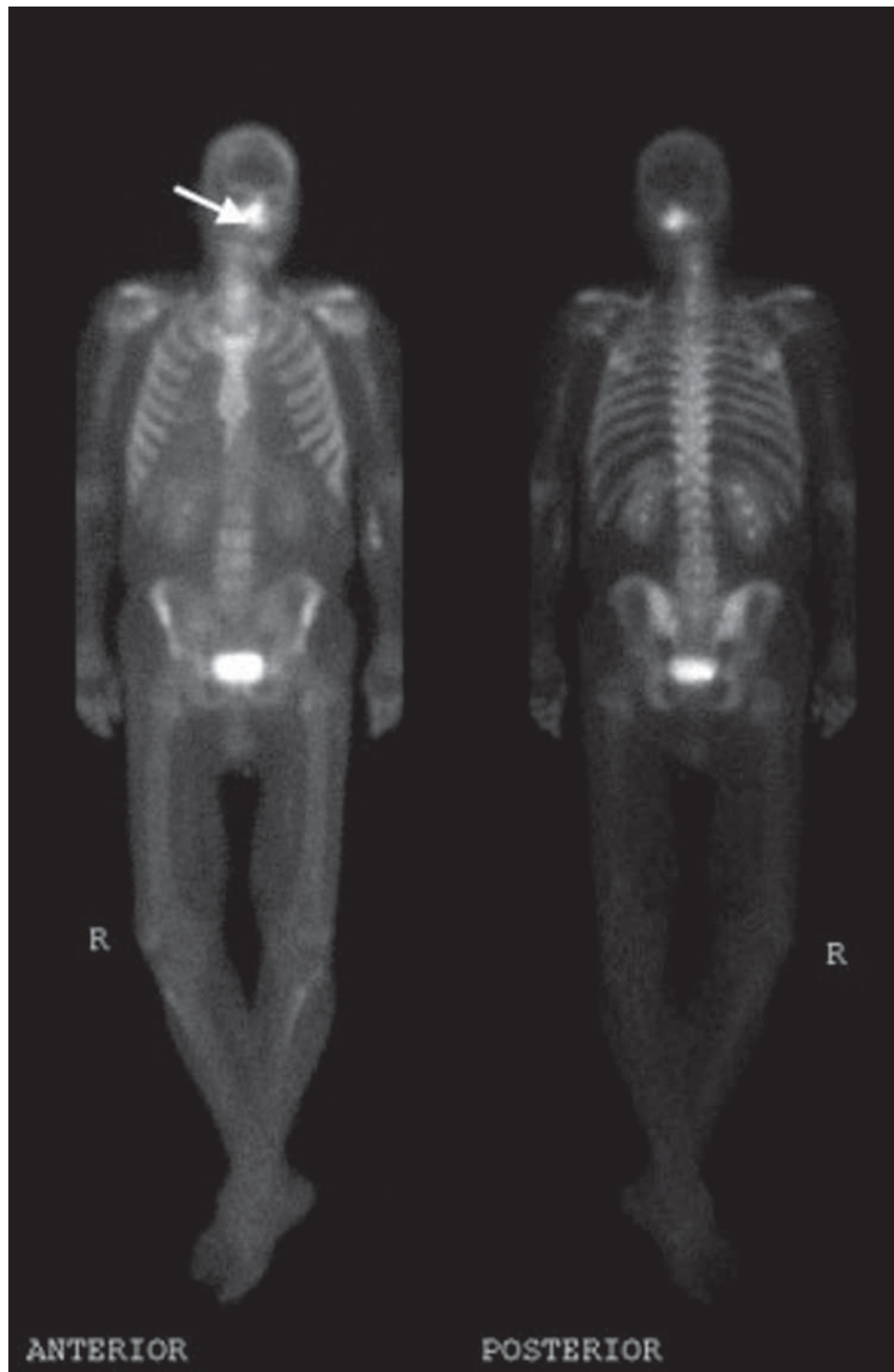


Figure 2 Bone scan showed focal increased uptake involving left skull base likely due to osseous metastasis.

hypoglossal foramen.^{2–4} There are few syndromes which involve the lower cranial nerves 9–12 unilaterally in various combinations.

Jugular foramen syndrome

The Jugular foramen syndrome was described first by Vernet in 1917. It involves neuropathy of 9th, 10th and 11th cranial nerves.

It is most commonly secondary to metastatic skull lesions. Hoarseness and dysphagia are the most common presenting complaints.^{4 6 7}

Villaret's syndrome

Villaret's syndrome involves dysfunction of cranial nerves 9th, 10th, 11th, 12th and sympathetic involvement (Horner syndrome). It is also referred to as the retropharyngeal

space syndrome. If the pathological process extends into the retroparotid space, there may be involvement of seventh cranial nerve.^{4 6}

Gradenigo's syndrome

Gradenigo's syndrome is typically associated with suppurative otitis media affecting the petrous apex of the temporal bone. It presents with pain in the distribution of trigeminal nerve combined with abducent nerve palsy. If the infection spreads to the skull base, then features of jugular foramen syndrome may coexist.^{4 6}

Collet–Sicard syndrome

CSS was named after Fredric Collet (1870–1966), and Jean A Sicard described cases of unilateral paresis of cranial nerves 9, 10, 11 and 12.⁵

Cases of CSS secondary to skull base tumours were reported in patients with haemangiopericytoma, melanoma, myeloma, prostate and breast cancer.⁵

Burst fracture of first cervical vertebra, occipital fractures and vasculitis were reported to cause CSS.⁵

Internal carotid artery dissection, coiling and aneurysm are potential causes.⁵

A thorough history and physical examination are an essential part of hoarseness evaluation. Before labelling the cause of recurrent laryngeal nerve paralysis an idiopathic, a CT scan covering the course of recurrent laryngeal nerve from the skull base through the aortic arch is indicated.

A lesion of the main trunk of the vagus nerve high in the neck or skull base should be suspected; if other branches of the vagus nerve (palatal or pharyngeal paralysis) are involved or if other cranial nerves are affected. MRI is the test of choice and if negative a CT scan of the skull base is indicated as bony metastases sometimes are not evident on the MRI.² This is the first reported case of colon cancer to present as CSS.

Learning points

- ▶ Hoarseness is a symptom, not a diagnosis. It has wide range of causes.
- ▶ A thorough history and physical examination are essential parts of hoarseness evaluation.
- ▶ Skull base tumours are rare causes of hoarseness. They do not cause isolated hoarseness as other cranial nerves, for example, glossopharyngeal, spinal accessory and hypoglossal nerves are usually involved in these cases.
- ▶ A CT scan covering the course of recurrent laryngeal nerve from the skull base through the aortic arch is indicated before labelling the cause of recurrent laryngeal nerve paralysis an idiopathic.
- ▶ Colon cancer can present as CSS.

Competing interests None.

Patient consent Obtained.

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