

*Case Report*

Hiccups and Dysphagia A Rare Presentation of A Lateral Medullary Syndrome (Wallenberg's Syndrome)

V.C.Patil¹, Rahul Patil², Ketan Kshirsagar³, Rishu Garg³, Vinit Chaudhary³, Sumit Choudhary³

¹Associate Professor, ²Assistant Professor, ³Resident,
Department of Medicine, Krishna Institute of Medical Sciences, Karad, Maharashtra, India.

Corresponding Author: Ketan Kshirsagar

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ABSTRACT

A hiccup is a rare symptom in lateral medullary syndrome (Wallenberg's Syndrome). The lateral medullary syndrome is an uncommon form of stroke. A 52 years old male smoker patient presented with history of sudden onset hiccups, dysphagia, vertigo and hoarseness of voice. He was diagnosed as a case of lateral medullary syndrome. Patient improved partially with supportive line of treatment. Lateral medullary syndrome is caused by occlusion of the cranial segment of vertebral artery or posterior inferior cerebellar artery (PICA). We can diagnose lateral medullary syndrome clinically and CT/MRI of the brain. It should be managed with appropriate treatment.

Key words: dysphagia, lateral medullary syndrome, Wallenberg syndrome, posterior inferior cerebellar artery, hiccup

INTRODUCTION

Lateral medullary syndrome (LMS) or Wallenberg's syndrome (WS) is caused by vascular event in the territory of the inferior cerebellar artery or vertebral artery. ⁽¹⁾ In this report, we present a case of Wallenberg syndrome treated in our institute and we discuss its pathological and clinical features and review the related literature.

CASE REPORT

A 52 years old man, was admitted to hospital with complaints of continuous hiccups, hoarseness of voice, dysphagia and vertigo evolving within 6 hours. Clinical examination revealed hypertension (BP170/100mm of Hg). Neurological

examination showed left eye meiosis, ptosis, anhidrosis and enophthalmos of left side (Horner's syndrome) (figure no.3). The uvula was deviated towards right side suggestive of left sided of 9th and 10th cranial palsy. Patient had cerebellar signs on left side. Patient had grade –II central nystagmus with rotatory on left lateral gaze. Power, tone and deep tendon reflexes were normal. The plantar reflex was normal. There was loss of pain and temperature sensation on left half of face and right half of the body. There was anhidrosis on left half of face and right half of the body. The cardiovascular and per abdominal examination was normal. Respiratory examination revealed coarse crepitation on

right lower zone of lung suggestive of aspiration pneumonia and confirmed by chest radiogram. On investigations complete blood count was (total leucocyte count - 17000/um, Hb- 11.7gm%, platelet count - 3.25 lakhs/um), blood sugar level was 110 mg/dl and renal functions was normal. Chest x-ray showed right lower zone haziness suggestive of right lower zone pneumonia secondary to aspiration. Because of

neurological signs MRI brain was obtained which showed a hypo-intense on T-1 weighted image and hyper-intense lesion on T2 and FLAIR sequences in left lateral medullary region (figure no.1 &2). This lesion was hyperintense on diffusion weighted images (figure no. 2) with decline of apparent diffusion coefficient (ADC) on ADC map, compatible with an acute ischemic stroke.

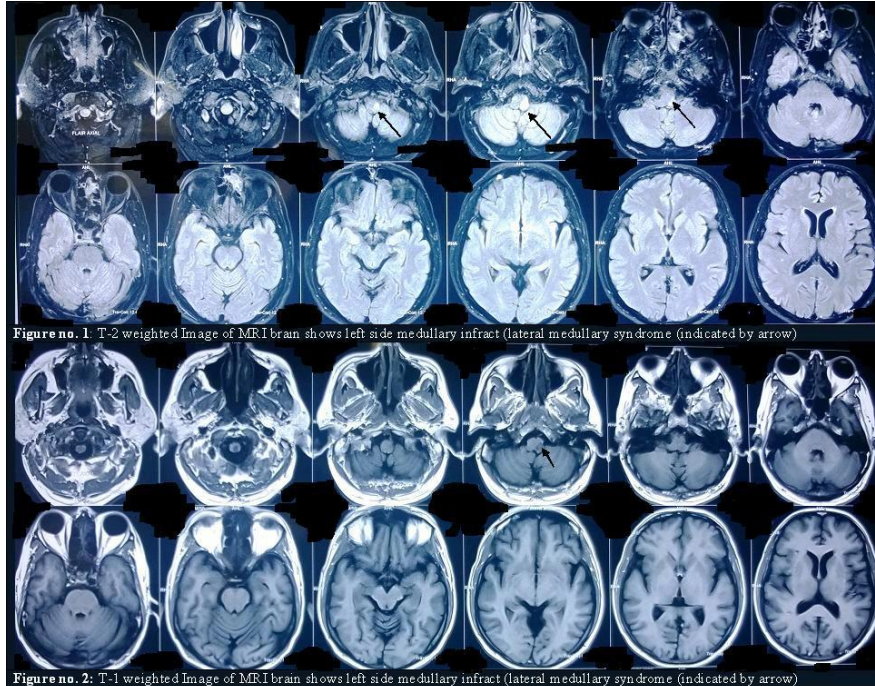


Figure no. 1 & 2: MRI Images of lateral medullary syndrome



Figure no.3: Showing left side ptosis and enophthalmus

Electrocardiogram was suggestive of left ventricular hypertrophy. This patient was antihypertensives, antiplatelet agents, statins and multivitamin supplementations. Patient was put on nasogastric tube and feed. Additionally Baclofen was given for the hiccups.

DISCUSSION

Lateral medullary syndrome is also called as Wallenberg's syndrome, after the eminent Adolf Wallenberg, a German physician and neuro-anatomist who give an accurate description and pathology of syndrome in 1901 after autopsy. ⁽¹⁾ It is also

called as posterior inferior cerebellar artery (PICA) syndrome. ⁽²⁾ It encompasses several symptoms due to affection of nuclei and nerve tracts located in lateral part of medulla. It may also involve infarction of posterior cerebellum, ⁽³⁾ causes include atherothrombosis occlusion, most commonly. Wallenberg syndrome, also called lateral medullary syndrome, results from an acute infarct that involves the lateral region of medulla oblongata. The clinical signs and symptoms can be variable depending on the size of the stroke and the affected nerve tracts. The syndrome is usually readily identifiable as it frequently causes a characteristic set of neurological deficits that includes sensory deficits affecting the ipsilateral face and the contralateral trunk and extremities. The syndrome is caused by a variety of diseases that lead to occlusion of the vertebral artery or the posterior inferior cerebellar artery (PICA). Treatment is mainly supportive. Various tracts are affected and patient present with multiple sign and symptoms. The involvement of vestibular nucleus causes rotational and horizontal nystagmus, diplopia, oscillopsia, vertigo, nausea and vomiting. The most disabling feature of ipsilateral ataxia caused by infarction of inferior cerebellar peduncle and vertigo from infarction of vestibular nuclei. Disease of spinocerebellar tract leads to limb ataxia and the feeling of falling towards the side of lesion. Descending sympathetic fibres which run in close proximity to spinothalamic tract in brainstem may be involved, giving rise to an ipsilateral Horner syndrome: partial ptosis, meiosis, anhidrosis, autonomic dysfunction occur in form of diaphoresis and tachycardia and orthostatic hypotension. Paralysis of palate and vocal cord (the 9th and 10th cranial nerve) is related to dysphagia, hoarseness and diminished gag reflex. Stridor has been described. ⁽⁴⁾ Hiccups are an infrequent result of lateral

medullary infarction, however the anatomical lesion of hiccups is not well known. Hiccups are repeated, involuntary spasmodic contraction of diaphragm with sudden closure of glottis. The spinal trigeminal nucleus which is rostral extension of dorsal horn conveys sensory information: crude touch, pain and temperature. Its involvement result in ipsilateral loss of touch, pain and temperature sensation from ipsilateral side face as primary fibres do not cross before entering the nucleus. ⁽⁵⁾ Involvement of lateral spinothalamic tract result in contralateral deficit in pain and temperature sensation from the body. The cuneate and gracilis nuclei are linked to numbness of contralateral arm, trunk and leg. Hemiplegia is uncommon, but may be related to involvement of the corticospinal tract as it passes through medulla. This may be seen in vertebral artery dissection-Opalskis syndrome. ⁽⁶⁾ MRI brain (T₁, T₂ and Gadolinium enhanced T₁ weighted scan) is Gold standard for diagnosis of such lesion. ⁽⁷⁾ Park MH et al stated in the middle level lateral medullary lesions, dorsolateral lesions are most often involved. Patients with lateral medullary infarction presenting with hiccups also has vertigo, dizziness, nausea, vomiting, and dysphagia. The observations suggest that middle level and dorsolateral lesion locations in lateral medullary infarction frequently induce hiccups these findings were similar to our case report. ⁽⁸⁾ In this case dysphagia and hiccups were the main symptoms at the onset of lateral medullary syndrome (Wallenberg's syndrome), so this case is an unusual presentation. ^(9,7)

CONCLUSION

We reported an atypical case of lateral medullary syndrome (Wallenberg's syndrome), presented with dysphagia and hiccups as presenting symptoms. Intractable

hiccups and dysphagia can be additional symptom of lateral medullary syndrome.

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