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A Case Report on Wallenberg's Syndrome

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ABSTRACT

The Wallenberg Syndrome (WS) is an uncommon form of stroke that occurs due to occlusion of the posterior inferior cerebellar artery (PICA) or one of its branches and thus causing an infarction or stroke in the lateral medulla of the brain stem. The syndrome can also occur due to occlusion of the vertebral artery, the superior, middle, or inferior medullary vessels. It is usually seen in elderly patients with vascular risk factors. The common presentation of this condition ranges from balance problems, leaning towards one side, numbness on one side of the face and body, drooping of eyes, hoarseness, trouble `swallowing, dizziness. The diagnosis can be done clinically and may be confirmed by imaging with CT/MRI of the brain. It is usually managed with appropriate symptomatic management and supportive treatment.

Keywords – Wallenberg's syndrome (WS). Posterior inferior cerebellar artery (PICA). Computed tomography (CT). Magnetic resonance imaging (MRI).

INTRODUCTION

Wallenberg's syndrome (WS) also known as lateral medullary syndrome (LMS) or posterior inferior cerebellar artery (PICA) syndrome, a neurological syndrome that was encountered occasionally by physicians over the years was first described clinically in 1895 (by Gaspen Viessux) and published by Adolf Wallenberg with accurate description from autopsy specimen in 1901. It is one of the most characteristic neurological syndrome caused by the occlusion of ipsilateral posterior inferior cerebellar artery (PICA) leading to infarction of the posterolateral portion of the medulla oblongata (the lateral medullary plate) [1] [2].

PICA occlusion remains a minor cause for the condition with nearly 80% cases caused by occlusion of vertebral artery which usually splits to PICA and anterior spinal artery before merging with the opposite vertebral artery to form basilar artery [3]. The risk factors include hypertension, smoking, tobacco use, preeclamsia-eclampsia, diabetes and vertebral artery dissection which may in turn be associated with cerebral embolism, neck manipulation / injury, Marfan syndrome, Ehlers Danlos syndrome, fibromuscular dysplasia [4]. The clinical symptoms include dysphagia, hoarseness of voice, hiccups, facial pain, ataxia, dizziness with vertigo, diplopia, nystagmus, slurred speech, nausea, vomiting, loss of balance with gait instability. The facial weakness may due to the fibers of the facial nerve that arc caudally to the medulla before exiting at the Ponto medullary junction. The management techniques range from intravenous thrombolysis to appropriate symptomatic management with supportive measures.

CASE REPORT

A 57 year old male with past history of hypertension and diabetes mellitus presented with complaints of hiccups for 7

days, nausea, dysphagia, dysarthria, dizziness, inability to hold objects and ataxia of the gait. The pulse rate, respiratory rate, blood pressure and his mental status were found to be normal upon admission. Initially the laboratory investigation shows increased platelet count (667000 cumm3) and increased fasting (151mg/dl) as well as random blood sugar level(158mg/dl). Peripheral smear test showed reactive thrombocytosis and MRI scan suggested subacute infarct in left ganglionic capsular region and diffuse age – related cortical atrophy with ischemic changes in the brain (figure 1). He was managed with Enoxaparin sodium 40mg/SC/BD,a low molecular weight heparin which was given as subcutaneous injection for five days. anticoagulant and antiplatelet agents such as Clopidogrel 75mg PO/OD and Aspirin 75mg PO/OD was given. Pantoprazole 40mg/PO/OD was administered to prevent gastric irritation and ulceration associated with aspirin, the blood pressure was under control with Telmisartan 40mg/PO/OD. Domperidone 10mg/PO/BD was given prophylactically to prevent nausea and vomiting associated with other agents, Cholesterol level was under control with Atorvastatin 20mg PO/OD, Baclofen 10mg/PO/BD was provided to treat hiccups and muscle spasm. His Blood glucose level was under control with Glimepiride Metformin 1/500mg combination/PO/OD. He had symptomatic improvement after 5 days of treatment and was hence discharged with proper advice and medication.

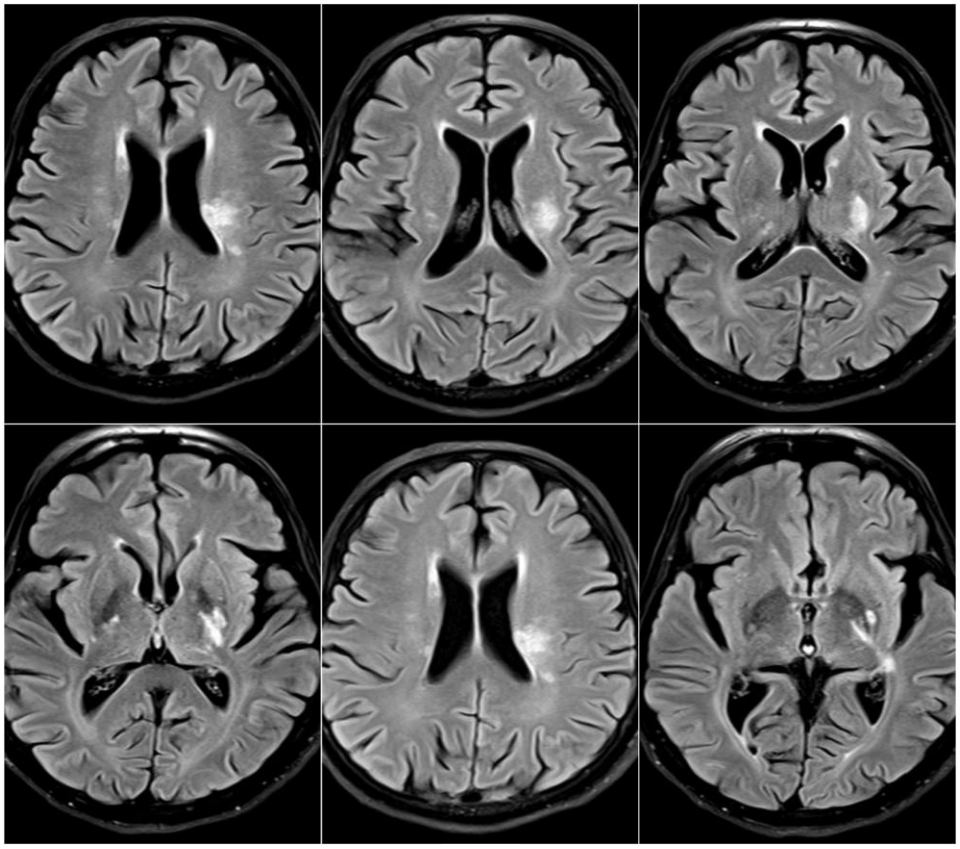

Figure 1

DISCUSSION

The neurological ailment now commonly referred as Wallenberg Syndrome was first described in 1895 by Gasan Viessux as an uncommon stroke which occurs due to infarction of nuclei and nerve tracts located in lateral part of medulla [4]. Later German physician and neuro anatomist Adolf Wallenberg gave an accurate pathological description of the syndrome based on autopsy of the specimen. It may also occur when there is

an infarction of posterior cerebellum which includes atherothrombosis occlusion. The prospect of patients with WS mainly depends on the location and size of the area of the brain stem damaged by stroke.

The diagnosis can be done clinically and may be confirmed by imaging with CT/MRI of the brain. [5]. Here the MRI scan of the patient shows subacute infarct in left capsular ganglionic region and diffuse age – related cortical atrophy with ischemic changes in brain. Some may recover within weeks to months and others may be left with significant neurological disabilities following treatments. Among the signs and symptoms, hiccups and dysphagia are the major one. It may be severe enough to require NG feeding but can often improve rapidly and thus often return to oral feeding within 2-3 months [5].

Early initiation and short term use of antiplatelet agents are beneficial for acute ischemic stroke. The aspirin clopidogrel combination is a common practice which is optimized in hospital setting for patient compliance [2]. Among patient receiving clopidogrel, combination therapy with proton pump inhibitor other than pantoprazole leads to the loss in efficacy and can leads to the increased risk of reinfraction.

It usually doesn't have any specific treatment and is managed with appropriate symptomatic treatment and other supportive measures.

CONCLUSION

The rare disorder of WS was presented with uncontrollable hiccups and was confirmed with MRI. It was treated with oral antiplatelet agents and antihypertensives for long term management of the condition. It was supported with gastroprokinetic agents as well as antiulcerants thus causing symptomatic relief and offering good quality of life for the patient.

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