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A CASE REPORT ON WALLENBERG SYNDROME

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ABSTRACT

Wallenberg syndrome or lateral medullary syndrome is a rare condition in which a stroke or ischemia occurs in the lateral part of medulla oblongata in brain stem. In this case a54 year old male patient was admitted in the neurology department with complaints of sudden onset of vertigo followed by walking difficulty and hiccups since 1 day. He was an alcoholic and had no family or medical history. His BP was found to be 170/100mmhg on admission with slightly elevated and fluctuating pulse rate and nervous system showed horners syndrome characterized by nystagmus (+) rotary, (L) 10^{th} palsy, ataxia to (L), sensory impairment (R) side of body. His lipid profile test showed elevated cholesterol, triglyceride, LDL and VLDL. An MRI of his brain showed acute/subacute infarct in left lateral medulla oblongata. His final diagnosis included (L) Lateral medullary infarct and Hypertension. The patient was managed efficiently with Injection Enoxaparin, Citicoline andoral doses of Clopidogrel, Atorvastatin and Cinnarizine to manage his symptoms. The symptoms subsided and the condition of the patient improved and hence was discharged within 7 days with adequate advice and discharge medications

INTRODUCTION

Wallenberg syndrome also known as lateral medullary syndrome, posterior inferior cerebellar artery syndrome, vertebral artery syndromewas described first by GaspanViessux in 1895.(1)Itis a rare condition in which a stroke occurs in the lateral medulla (part of brain stem). It may occur due to ischemia in the vertebral/posterior inferior cerebellar arteries of the brain stem (occlusion of the posterior inferior cerebellar artery), mechanical trauma to the vertebral artery in the neck, hematoma, aneurysm of vertebral artery, head injury and arteriovenous malformations. The syndrome and associated characteristics were first outlined and published in 1961. Lateral medullary infarction was found to be associated with vertebral artery dissection in 15% to 26% of cases and hence it is important that it be diagnosed accuratelyand at the earliest inorder to provide necessary treatment and to bring the person back to normal working life.(2) The symptoms may occur ipsilaterally or contralaterally and may include sensory loss on face, ataxia, vomiting, vertigo, hoarseness, dysphagia, hiccups. It may also include horners syndrome characterized by miosis, drooping eyelid(ptosis), difference in pupil size between the two eyes (anisocoria), little or no sweating (anhidrosis).(3,4) The treatment mainly focuses on relieving symptoms and rehabilitation. It also depends on the underlying cause and how quickly it is identified. The treatment is similar to that of

general ischemic stroke management and mainly includes low molecular weight heparins, antiplatelet drugs, anti-hyperlipidemic drugs, neuroprotective agents, cognition enhancers, muscle relaxants or antispasmodics and drugs to treat vertigo associated symptoms. A feeding tube maybe needed for severe swallowing problems, including physiotherapy, speech and swallowing therapy.

CASE REPORT

A 54 year old male patient was admitted in the neurology department with complaints of sudden onset of vertigo followed by walking difficulty and hiccups since 1 day. He was an alcoholic and had no family or medical history.His BP was found to be 170/100mmhg on admission with slightly elevated and fluctuating pulse rate and nervous system showed horners syndrome characterized by nystagmus (+) rotary, (L) 10^{th} palsy, ataxia to (L), sensory impairment (R) side of body. His lab investigation reports showed a lipid profile test with elevated cholesterol (265 mg/dl), triglyceride (282 mg/dl), LDL (143 mg/dl) and VLDL(56 mg/dl) thus giving the interpretation that he was hyperlipidemic. His LFT showed slightly elevated SGOT (45 U/L). An MRI of his brain showed acute/subacute infarct in left lateral medulla oblongata indicating the signs of a lateral medullary syndrome. His CT brain showed atrophic changes in the brain parenchyma, predominantly involving the frontal lobes bilaterally and left maxillary polyp. His final diagnosis included (L) Lateral medullary infarct and Hypertension. The patient was managed with low molecular weight Enoxaparin0.6ml given subcutaneously once daily for 7 days, an antiplatelet drug Clopidogrel 75mg was given orally once daily for 7 days, proton pump inhibitor Pantoprazole injection 40mg was given twice daily for 4 days and then changed to oral form of tablet. An antihyperlipidemic drug Atorvastatin20mg was given orally HS for all 7 days to reduce the cholesterol level, Injection Citicoline500mg was given BD for 3 days and then changed to tablet form for remaining 4 days. An antihistamine drug Cinnarizine 25mg was given as half a tablet thrice daily for last 4 days.The patient was given Bisacodyl suppository 10mg as stat on admission.A skeletal muscle relaxant Baclofen 10mg was given orally as stat and thereafter to be taken when required. The symptoms subsided and the condition of the patient improved and hence was discharged within 7 days with adequate advice and discharge medications.

DISCUSSION

Wallenberg syndrome is a condition in which a stroke occurs in the lateral medulla (part of brain stem). Here the patient was a 54 year old male patient who experienced the typical Wallenberg symptoms such as sudden onset of vertigo, ataxia, gait and hiccups. On admission he was found to be hypertensive and his lab reports revealed a hyperlipidemic condition with elevated cholesterol, triglycerides, LDL and VLDL level. The MRI of the patient showed sufficient evidence of the syndrome and its characteristics. It showed an acute/ subacute infarct in the left lateral medulla oblongata indicating signs of lateral medullary syndrome. The Horners syndrome with sensory impairment to right side of his body, ataxia and nystagmus all show adequate and potent indication of the Wallenberg syndrome.[(5)]

The Enoxaparin given is an anticoagulant drug belonging to class low molecular weight heparin which acts by anti-factor Xa and anti-thrombin activities that confers antithrombotic properties and is thus helpful in the treatment of stroke. The antiplatelet drug Clopidogrel acts by inhibiting platelet aggregation by binding to P2Y12 receptor on platelets and thereby helps to treat and prevent complications of stroke. His elevated cholesterol and lipid levels were reduced by administering an antihyperlipidemic drug Atorvastatin which is an HMG-CoA-Reductase inhibitor. Also, the use of statins was shown to have the ability to decrease the risk of stroke when compared with other antihyperlidemic agents such as fibrates and resins, as they mainly exerted their positive effects by an anti-atherothrombotic activity which is beneficial in stroke management.

The Citicoline tablet given twice daily influences the cognitive abilities and improves nerve transmission, thus helps in improving the symptoms associated with

stroke. The antihistaminic drug Cinnarizine helps to treat vertigo associated with the Wallenberg syndrome. The patient was also given Pantoprazole which is a proton pump inhibitor and thus helps to reduce the gastric irritation by reducing gastric acid secretion. Among patients who were given Clopidogrel following an acute infarction, concurrent therapy with any proton pump inhibitors other than pantoprazole was characterized by a loss of the favourable effects of Clopidogrel and in addition it also increased the risk for a reinfarction.(1) The patient had experienced hiccups which are described as repeated voluntary spasmodic contractions of the diaphragm accompanied with a sudden closure of glottis that produces the hic sound and it was treated by administering Baclofen tablet 10mg orally as stat and also to be taken when required. Baclofen is an antispasmodic and skeletal muscle relaxant that works by inhibiting both monosynaptic and polysynaptic reflexes at the spinal cord level possibly by hyperpolarization of primary afferent fiber terminals with resultant relief of muscle spasticity.(6)The Bisacodyl suppository 10mg given as stat medicine is a laxative and helps in relieving the constipation that the patient experienced on admission to the hospital. The patient's lateral medullary syndrome was managed accordingly with an appropriately desired outcome.

CONCLUSION

Wallenberg syndrome being one of the raresttype of stroke, was managed appropriately in an efficient manner. The symptoms associated with lateral medullary syndrome were treated accordingly and subsided. The patient showed sufficient improvement in health outcomes and was satisfied with the treatment and care provided.

DECLARATION OF CONFLICTING INTERESTS

The author(s) declare that there is no conflict of interest.

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