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Case Report

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A RARE CASE REPORT ON BEAUTY PARLOR SYNDROME AND CEREBRAL SALT WASTING SYNDROME

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ABSTRACT

Beauty parlor stroke syndrome (BPSS) is a rare condition characterized by mechanical impingement of a vertebral artery (VA) during neck rotation and/or hyperextension followed by vertebrobasilar insufficiency. In this case report we will discuss about a 77year male patient who has admitted to hospital with chief complaints of vertigo, dizzinesss and generalized weakness. Later on, it was diagnosed as beauty parlour syndrome, and cerebral salt wasting syndrome induced hyponaetremia induced seizures along with mixed axonal peripheral neuropathy.

KEYWORDS: Beauty parlor syndrome, cerebral salt wasting syndrome, hyponatremia, seizures, mixed axonal peripheral neuropathy, hyperglycemia.

INTRODUCTION

Beauty parlor stroke syndrome (BPSS) is a rare clinical presentation caused by development of vertebrobasilar ischemia and infarction. cerebral salt-wasting syndrome is defined by the development of extracellular volume depletion due to a renal sodium transport abnormality in patients with intracranial disease and normal adrenal and thyroid function. Hyponatremia is compounded by the tendency of neuronal tissue to undergo demyelination during rapid correction of hyponatremia in case of mixed axonal peripheral neuropathy. Patient developed hyponatremia induced seizures Hyponatremia produces brain edema and increased intracranial pressure that lead to seizures.

CASE REPORT

A case of 77 years male patient was brought to neurology department with a complaints of generalized weakness, dizziness and vertigo. His past medical, family and psychological history was not significant of serious neurological. He has a past medical history of hypertension (Tab.hydrochlorothiazide 50 mg PO OD) and type 2 diabetes mellitus (metformin 500mg), seizures (phenytoin 100 mg), pulmonary tuberculosis a year back, coronary artery disease.

Clinical findings, Diagnostic assessment and Therapeutic intervention
Mri and Mri Angiography of Brain.

History	Technique	Findings
Vertigo, Ataxia	T1 and T2 weighted sequences in multiple plains using a quadrature head coil. MR angiogram of the brain was performed using a 3DTOF sequence through the circle of willis. 2D and 3D construction were obtained using maximum intensity projection algorithm.	Multiple lacunar infracts in both cerebral hemispheres, gangliocpsular regions with mild periventricular ischemic white matter hyper intensity , acute small vessel ischemic disease, moderate cerebral and mild to moderate cerebellar atrophy, dolico ectasia of the vertebro basilar system, incidental note is made of mucosal thickening fluid in mastoid area cells as well as mild mucosal thickening in frontal, ethmoid and maxillarysinuses. Subtle narrowing involving the P1 segment of both posterior cerebral arteries and distal M1 segments of both middle cerebral arteries, mild dolico –ectasia of vertrebro basilar system, with the tortuous vertebral arteries indenting upon the adjacent portion of brain stem.

Neck Doppler

Study	Findings
Extra Cranial Carotid And Vertebral Arteries	Fibrous fatty plaques in right ICA causing 35-42% stenosis, in left carotid bulb causing 32% stenosis, left ICA causing 42%stenosis.

Day	Reference	Serum sodium
1	135-155 mmol/lit	120mmol/lit
3	135-155 mmol/lit	125mmol/lit
5	135-155 mmol/lit	133mmol/lit
7	135-155 mmol/lit	142mmol/lit

Serum electrolytes showed: Serum sodium: 120 mmol/lt, serum potassium and serum chorine are in normal ranges. Vit.d3: 19.6ng/ml. random blood sugar: 220 mg/dl. dix-hallpike - negative, serum uric acid (1.2mg/dl).

CASE DISCUSSION

Beauty parlor stroke syndrome (BPSS) is a rare clinical presentation caused by development of vertebrobasilar ischemia and infarction. Sustained hyperextension of the neck and rotational injury to the vertebral arteryduring routine activity have been shown to contribute to the development of BPSS.

The presence of vascular anomalies and development of iatrogenic vascular injury have been proposed to trigger BPSS; however, the exact mechanism for development of stroke remains unclear. Symptoms include vertigo, regular stroke symptoms, as well as dizziness and unsteadiness in their hands, migraine-type headaches, some loss of vision or blurred vision, neck swelling, and change of taste. In this case the patient is having vertigo, generalized weakness and dizziness. The patient developed beauty parlor syndrome 2 days back when he was washing his hair vigorously due to lack of time. Beauty parlor syndrome is confirmed by MRI reports that reveals formation of acute infracts in to acute small vessel ischemic disease, moderate cerebral and mild to moderate cerebellar atrophy. cerebral salt-wasting syndrome is defined by the development of extracellular volume depletion due to a renal sodium transport abnormality in patients with intracranial disease and normal adrenal and thyroid function. cerebral salt-wasting syndrome includes symptomatic hyponatremia and dehydration. Here our patient is having hyponatremia (serum sodium: 120mmol/lit) and serum uric acid (1.2mg/dl). Hyponatremia is compounded by the tendency of neuronal tissue to undergo demyelination during rapid correction of hyponatremia. It is characterized by presence of tingling sensation. In this patient mixed axonal peripheral neuropathy is confirmed by motor nerve studies. Patient developed hyponatremia induced seizures Hyponatremia produces brain edema, and increased intracranial pressure that lead to seizures. When they are treated with phenytoin patient developed hyperglycemia.

Treatment

Treatment given: the patient was treated with aspirin 75mg and atorvastatin 10 mg, is used to treat beauty parlour syndrome and stenosis in carotid arteries. betahistidine -16 mg TID is give to treat vertigo, asyptom of beauty parlour syndrome. Anti hypertensive drugs like amlodipine - 5 mg SOS. Temisarton +amlodipine (40 mg+5mg). Phenytoin an anti epileptic drug is given to treat hyponatremia induced seizures where the patient developed hyperglycemia conditions (FBS: 170 mg/dl; RBS: 220mg/dl). Later the drug phenytoin is replaced with leviteracetam 500 mg bd. Multivitamin injections are given.

CONCLUSION

A very unique and rare complication of beauty parlor syndrome and cerebral salt wasting syndrome induced hyponatrmia induced mixed axonal peripheral neuropathy along with seizures. When the treatment was given to treat seizures by phenytoin, an anti epileptic drug the patient developed hyperglycemia. The patient was reported to higher centres as the treatment is getting complicated in accordance to patient's response.

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