CASE REPORT

Ischaemic Stroke as A Presenting Feature of Polycytemia RubraVera - A Case Report

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ABSTRACT

Stroke secondary to polycythemia rubra vera (PRV) is very uncommon. A 55 years old man presented to us with ischaemic stroke, imaging revealed one recent and multiple previous Lacunar infarcts. Evaluation for underlying cause proved him as a case of PRV. Effective treatment of PRV can prevent the further recurrence of Ischaemic stroke.

Key Words: polycytemia rubra vera, ischaemic stroke, hypercoagulable state

Introduction

Stroke is a clinical syndrome characterized by sudden onset of focal rather than global neurological signs that lasts more than 24 hours or leads to death and has a presumed vascular cause, which includes both infarction and haemorrhage.1 It is the third leading cause of death worldwide and major cause of adult neurological disability.1 About 80% are caused by primary cerebral ischaemia resulting in infarction, on the other hand only 20% are caused by cerebral haemorrhage.1 Ischemia occurs when there is a decrease in blood flow to less than 20 mL/100 g of brain tissue per minute. Reduction of blood flow to less than 16mL/100g of brain tissue per minute leads to tissue death within one hour. In the absence of blood flow, death of brain tissue can occurs within 4 to 10 minutes2. Majority of ischaemic stroke are due to local damage to a vessel wall from atherosclerosis and thrombosis. Rests of them are embolic cause and about one-quarter are cardioembolic1. There are many other rare causes of ischaemic stroke. Several hematological disorders and haemostatic defects also increase risk of ischemic stroke. A common feature of these disorders is the creation of a prothrombotic state (hypercoagulable state). Hematological diseases such as essential thrombocythemia, polycythemia rubra vera (PRV), and thrombotic thrombocytopenic purpura can cause stroke,3 though it is very rare. They usually produce their own features before development of stroke. Here we report a case who had Ischaemic stroke as a presenting feature of Polycythemium rubra vera.

Case Report

A 55 years old normotensive, nondiabetic, nonsmoker, previously healthy man from Mymensingh presented with sudden onset of weakness of the left side of his body. On quarry, he gave history of global dull headache and fullness of upper abdomen for last 1 month. There was no history of chest pain, chest tightness, palpitation, respiratory distress, skin rash, bleeding manifestation, itching, blurring of vision, leg swelling and fever. On clinical examination, he was alert, well oriented with plethora and injected conjunctivae, no cyanosis, blood pressure was 130/80 mm of Hg.

Fig 1: Plethora with injected conjunctivae
Neurological examination revealed, dysarthria, left sided upper motor type of facial palsy, muscle power in left upper and left lower limb were 4/5 with exaggerated all deep tendon reflexes in the same side. Planter reflex was extensor and Hoffmann’s sign was positive in left side. Abdominal examination revealed palpable huge spleen, 15 cm from left costal margin along its long axis. Liver was not palpable. Otherwise all other examination findings were normal.

Investigation revealed Hb%- 17.1 g/dl, total red blood cell count - 8.1 x 1012/L (normal 4.5-5.5 x 1012/L), total white blood cell count - 23.5 x 109/L (4.00-10.00 x 109/L) with Neutrophils 87%, Pack cell volume - 53% (normal 37-53%), Neutrophilic leukocytosis on peripheral blood film, ESR - 02 mm in 1st hour. On the other hand total platelets count, blood sugar, blood urea, serum creatinine, serum electrolytes all were normal. ICT for Kala azar, HBsAg, Anti HCV were negative. Ultrasonography of the whole abdomen showed hugely enlarged spleen with increased coarse parenchymal echo texture all over without any focal lesion, splenic vessels were mildly dilated. Chest X-ray, ECG and Echocardiography were normal. MRI of the brain showed hypointense signal changes in T1 and hyperintense signal changes in T2 and flair images in the area of right middle cerebral artery distributions. There were also bilateral multiple old Lacunar infarct in thalamo-ganglionic regions. Finally he was diagnosed as a case of Ischaemic stroke with left sided hemiparesis secondary to Polycythemia rubra vera. Ischaemic stroke is a rare first presenting feature of Polycythemia Rubra Vera and uncommon cause of Ischaemic stroke.
Neurological features present. Hematocrit assay should be used as a routine item in stroke patients. Effective treatment of Polycythemia rubra vera can prevent the recurrence of further stroke.

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