

Top of Basilar Artery Syndrome

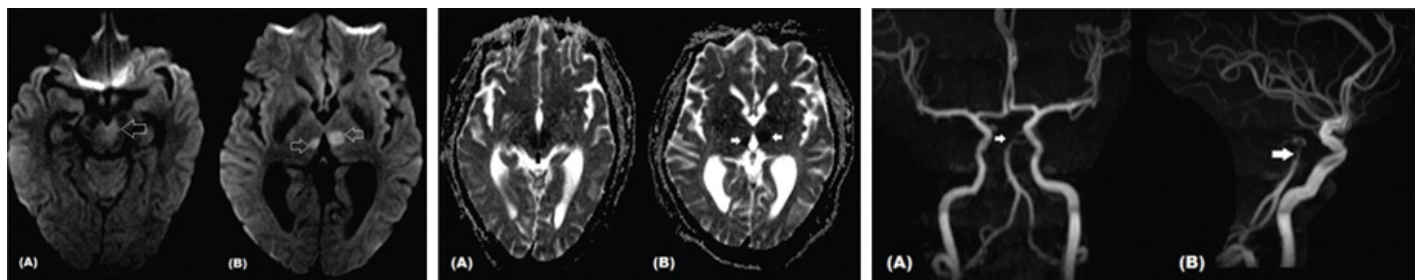
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A 45 years old male presented in Department of Medicine at the Shree Shayaji General Hospital with sudden onset bilateral ptosis, dilatation of the pupil and paresis of extraocular muscles. There were area of restricted diffusion on diffusion weighted images with corresponding low ADC (Apparent Diffusion Coefficient) value in periaqueductal region, oculomotor nucleus and medial thalami suggestive of acute infarct. In MR cerebral angiographic image filling defect is seen in the basilar artery suggestive of thrombosis [Table/Fig-1-3]. Top of the Basilar Artery Syndrome is also known as a Rostral Brainstem Infarction. It is due to the thromboembolic occlusion of the top of the basilar artery. Risk factors for the thrombosis are hypertension [1], diabetes mellitus [2], obesity [2], hyperhomocysteinemia [3], and excessive alcohol intake. It may be secondary to the cardiogenic emboli like mural thrombi in myocardial infarction and atrial fibrillations or valvular thrombi in

infective endocarditic and valvular heart disease. Hypercoagulable states like antiphospholipid antibodies [4], protein C deficiency [4], protein S deficiency [4] may also leads to the thrombotic events. Small vessel vasculitis in sickle cell disease may be associated with it. Bilateral thalamic ischemia occurs due to occlusion of perforator vessels. Clinically patient develops symptoms like visual and oculomotor deficits and behavioral abnormalities. However, motor dysfunction is often absent [5]. CT angiography, MR angiography and catheter angiographic are the imaging modality use to confirm the finding and demonstrate a filling defect [6]. Prognosis in patient with bilateral ocular palsy is poor.

Top of the basilar artery syndrome is occurring due to thrombotic occlusion of the basilar artery. Patient presented with visual and oculomotor deficit and behaviour abnormalities. MR angiography demonstrate filling defect in the basilar artery.



[Table/Fig-1a,b]: Axial section of diffusion weighted MR image shows (A) area of restricted diffusion in oculomotor nuclei region in midbrain (open white arrow) (B) area of restricted diffusion in bilateral medial thalami (open white arrow)

[Table/Fig-2a,b]: Axial section of Apparent Diffusion map shows (A) corresponding low ADC value in oculomotor nuclei region in medulla (black solid arrow) (B) in bilateral medial thalami (solid white arrow)

[Table/Fig-3a,b]: MR angiographic images shows filling defect in the basilar artery suggestive of thrombosis

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