



MACULAR STROKE - A RARE PRESENTATION

Neurology

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KEYWORDS

OBJECTIVE:

To document a rare case of visual loss due to Macular Stroke.

BACKGROUND:

Macular Stroke is a rare presentation of acute stroke, manifests as sudden visual loss.

METHODS:

Case report from tertiary medical centre.

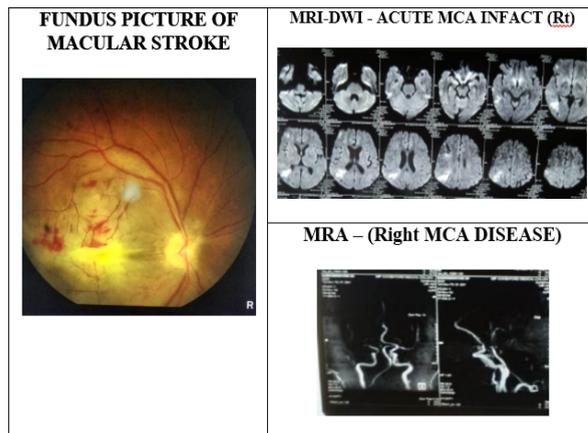
RESULTS:

39 years male presented with sudden onset of loss of vision in the right eye associated with weakness of left upper and lower limb, is a known smoker, alcoholic and hypertension patient. On admission he had blood pressure of 160/80mmHg. He is diagnosed to be having acute ischemic stroke. Neurological examination revealed weakness on the left side with the power of 3/5 with extensor plantar on the left side, other systems such as cardio vascular systems, respiratory systems and abdomen were normal. Investigations revealed he had dyslipidemia, high blood sugar, other basic investigations were normal. ECG and Echo were normal. CT brain revealed right fronto temporo parietal acute infarct.

MRI brain revealed acute infarct with hemorrhagic transformation in right temporoparietal occipital region. Acute on chronic infarct in right frontal region. Thin M1 segment & non visualization of inferior division of M2 segment of right middle cerebral artery.

Carotid Doppler study revealed low velocity and flow pattern in bilateral common carotid, internal carotid and external carotid arteries. Vertebral Doppler on both sides were normal.

On ophthalmic evaluation patient had macular branch arterial occlusion with macular detachment.

**DISCUSSION:**

The retina is approximately 0.5mm thick and lines the back of the eye. It is located near optic nerve. The function of the retina is to receive light that the lens has focused, convert the light into neural signals, and send these signals to the brain for visual recognition.

The center of the retina provides high resolving power of the eye. This area is responsible for central vision known as macula. The center of the macula is called as fovea.

There are two blood circulations to the retina both by ophthalmic artery, a branch of internal carotid artery.

The temporal vessel course towards fovea. The macular vessel arise from branches of superior temporal and inferior temporal arteries.

Central retinal arterial occlusion occurs due to embolism from the carotid or cardiac source, causes sudden painless severe vision loss usually unilaterally.

Branch retinal artery occlusion is due to central retinal artery disease. The resultant hypo perfusion of retinal tissue results in visual loss.

The causes of branch retinal artery occlusion includes embolism, migraine, vasospasm of migraine, cocaine abuse, vasculities etc.,

Risk factors for branch retinal artery occlusion includes diabetes mellitus, hypertension, dyslipidemia, alcohol, smoking and coronary artery disease.

Retinal ischemia is frequently demonstrated by nerve fiber layer infarcts appearing as cotton wool spots and retinal whitening on fundus examination.

Perfusion of the retinal arteries visualized by using fluorescein angiography.

This patient had risk factors for coronary, carotid, cerebral, and retinal vessel disease.

Retinal macular vessel disease results in macular degeneration. This may be early intermediate and late types. Treatment of macular stroke includes thrombolysis or surgical or laser mediated embolectomy.

This patient had risk factors and features of middle cerebral artery and retinal artery disease.

Fundus examination revealed macular branch arterial occlusion. Patient was treated with antiplatelets and statins and risk factors management. Patients showed improvements in vision and weakness of limbs. Patient is on follow up.

CONCLUSION:

This case is presented for its interesting clinical features and rarity.

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