Case Report

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Case of Bilateral MCA Infarct following Basal Ganglia Hemorrhage: A Rare Coincidence Case Report

Vikas Sharma[1], Amitabh Goel[2]

Abstract

Bilateral MCA (Middle Cerebral Artery) infarct following basal ganglia hemorrhage is a rare entity. We report a 52 year old lady with history of altered sensorium and weakness in right side of body for one day with past history of uncontrolled diabetes mellitus. On examination GCS (Glasgow Coma Scale) was E3V1M5 with right side hemiplegia. NCCT (Non Contrast Computed tomography) head showed left gangliocapsular hemorrhage with intraventricular extension. The patient was managed conservatively. The patient deteriorated three days after (GCS E1V1M1) and repeat NCCT head showed left basal ganglia hematoma with hypodensity in bilateral MCA territory suggestive of infarct. MRI brain confirmed CT findings of bilateral MCA infarct. Carotid doppler of neck vessels revealed a fibrofatty plaque at posterior wall of the carotid bulb on the left side extending into left ICA causing approximately 50% luminal compression. 2D ECHO revealed no clot or vegetations. The patient expired 1 day after. The clinical and radiological features of this rare entity are discussed.

Keywords: Bilateral; Infarct; Hemorrhage.

Introduction

Bilateral stroke is extremely rare. Bilateral internal carotid artery occlusion was first described by Fisher in 1954 [1]. Bilateral MCA infarct is a rare condition. Very few cases have been reported and bilateral infarct following haemorrhage is extremely rare. There are only a few reports in the literature of acute bilateral occlusion of the middle cerebral arteries [2]. Acute bilateral MCA occlusion leads to decerebrate rigidity , sudden coma and has poor prognosis.

Case Report

A 52 year old lady presented with history of altered sensorium and weakness in right side of body for one day with past history of uncontrolled diabetes mellitus. On examination pulse rate was 100/minute and BP (blood pressure) was 156/104 mmHg. RBS (random blood sugar) was 323 mg/dl. GCS was E3V1M5. Right side hemiplegia was present. NCCT head was done which showed left gangliocapsular hemorrhage of size 5.7x3.2 cm with intraventricular extension [Figure 1].

The patient had derranged blood urea (63.5mg/dl) and creatinine (2.7mg/dl). The patient was managed conservatively. The patient deteriorated three days after admission and repeat NCCT head showed left basal ganglia hematoma with hypodensity in bilateral MCA territory suggestive of infarct [Figure 2].

Carotid doppler of neck vessels revealed a fibrofatty plaque at posterior wall of the carotid bulb on the left side extending into left ICA causing approximately 50% luminal compression. The visualised portion of left CCA was normal. MRI brain showed large bilateral MCA territory infarct with left basal ganglia hemorrhage with IVH [Figure 3].

The patient's GCS was E1V1M1 and pupil were bilaterally dilated and fixed. 2D ECHO revealed no clot or vegetations. The patient expired 1 day after.

Author's Affiliation: [1]Associate Consultant [2]Senior Consultant, Department of Neurosurgery, Max Hospital Patparganj, Delhi 110092, India.

Corresponding Author: Vikas Sharma, Department of Neurosurgery, Max Hospital, Patparganj, Delhi 110092, India.
E-mail: vikassurg2015@gmail.com
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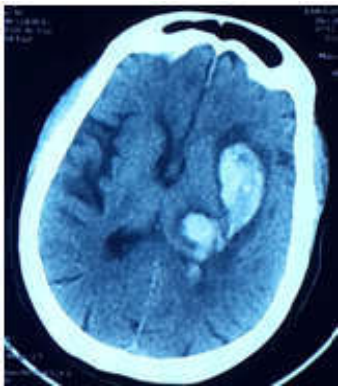

Fig. 1: NCCT head showing left ganglio capsular hemorrhage with intra ventricular extension

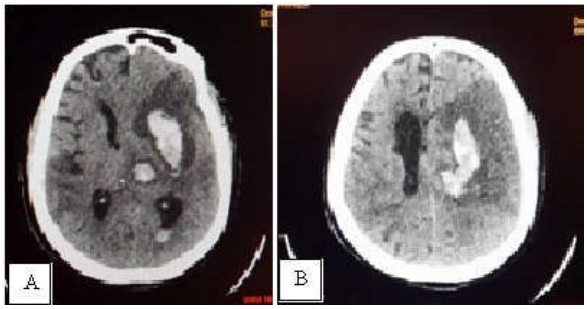

Fig. 2: NCCT head axial images (A,B) showing left basal ganglia hematoma with hypodensity in bilateral MCA territory suggestive of infarct

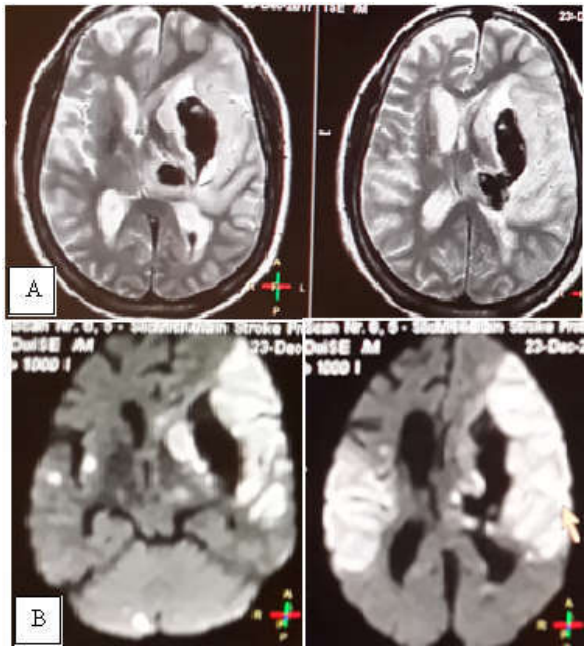

Fig. 3: MRI Axial T2 image (A)- showing hypointensity in left basal ganglia region with surrounding hyperintensity area and hyperintensity in right parietal region with mass effect Diffusion (B) showing diffusion restriction in Bilateral MCA territory

Discussion

Acute bilateral occlusion of the carotid arteries may be caused by atherothrombosis, dissection, or cardiac embolism. Bilateral occlusion of the middle cerebral arteries usually results from cardiac disease, e.g. atrial fibrillation with or without atrial thrombus [3]. Bilateral MCA infarct has been reported following snake bite and ingestion of cocaine and sildenafil [4,5,6]. Bilateral MCA occlusion associated with acom aneurysm is very are and few cases have been reported [7,8].

Clinically this condition presents with bilateral paresis, coma, and decerebrate rigidity related to sudden global ischemia. Brainstem reflexes presence in the initial stage may differentiate this condition from severe brainstem stroke. Acute bilateral MCA occlusion carries a poor prognosis leading to decerebrate status or death [9,10].

NCCT brain in early stage shows hyperdense MCA. If seen bilaterally, this could be referred to high hematocrit or diffuse vessel calcification and is usually not associated with vessel occlusion. MRI brain shows restricted diffusion in the territory of the affected artery. In emergency cases, CT angiography or MR angiography is mandatory to confirm vascular occlusion in order to direct proper treatment [11]. Acute bilateral occlusion of both middle cerebral arteries usually has bad prognosis. Outcome varies in different published series and is influenced by clinical condition, time period and location of the vessel occlusion [2,12].

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