ABSTRACT

OBJECTIVE: To present a case of Concomitant Total Anterior Circulation Infarction and Intraventricular Hemorrhage in a 80 year female

SETTING: Dr. Jose R. Reyes Memorial Medical Center, Manila, Philippines.

CASE REPORT: An 80 year old female presented with a history of sudden fall, decrease in conscious level and right sided hemiparesis. Initial clinical and radiological examination showed a Right Total Anterior Circulation Infarction (TACI). The sensorium of the patient deteriorated 19 hours post ictus. Hemorrhagic conversion or extension of the TACI was suspected. Repeated neuroimaging revealed primary intraventricular hemorrhage in posterior horn of right lateral ventricle with no overt hemorrhagic conversion.

CONCLUSION: Primary Intraventricular hemorrhages are uncommon in adults. In cerebral infarction blood is seen in ventricles as a result of intraventricular extension of hemorrhagic transformation. Here the finding of contralateral intraventricular hemorrhage in the absence of hemorrhagic transformation is most likely secondary to hypertension associated with an unrelated choroid vessel pathology. The findings of TACI and primary intraventricular hemorrhage are a rare concomitant findings.

KEY WORDS: B cell NHL, Duodenum, Obstructive Jaundice, Whipples Pancreaticoduodenectomy

INTRODUCTION

Primary intraventricular hemorrhage is a non-traumatic cerebral hemorrhage limited to the ventricular system that accounts for 3% of the spontaneous cerebral hemorrhages. 

Primary intraventricular hemorrhage can occasionally be traced to a vascular malformation of the choroid plexus or one of the choroidal arteries. Such hemorrhage can also result from periventricular bleeding from a medial thalamic hemorrhage, in which blood enters the ventricle without producing a significant parenchymal clot.

CASE PRESENTATION

A 80 year old female, hypertensive for 14 years poorly compliant to Amlodipine presented to the neurology emergency department, Jose Reyes Memorial Medical Centre, Santa Cruz Manila, on June 23, 2011 with history of sudden fall to her right side, with a decrease in conscious level and preferential movement of left side.

At the ER, the GCS was 10(E4V1M5) had an elevated BP of 190/110 with cardiac rate of 130 bpm and an irregularly irregular pulse rhythm. Pupils were 2-3 mm isocoric, equally reactive to light. There was homonymous hemianopsia on the left eye with shallow right nasolabial fold and right sided hemiparesis. Babinski’s was elicitable on the right side. The admitting impression was total anterior circulation infarction, left, probably cardioembolic, atrial fibrillation in rapid ventricular response. The NIHSS score was 20.
Initial Investigations included an unenhanced cranial CT scan, which revealed acute extensive infarct, left fronto-temporo-parietal lobes, left MCA (middle cerebral artery) territory with secondary compression of the left lateral ventricle and left to right subfalcine herniation (Fig:1). Age related basal ganglia calcifications were also noted. Chest radiograph showed cardiomegaly and atheromatous aorta, ECG confirmed atrial fibrillation in rapid ventricular response. PT, INR and platelet count were within normal range.

Nicardipine, Mannitol, Citicholine, Atorvastatin and Lactulose were started and she was admitted to the ward. On day 2, the patient deteriorated with GCS 3 and anisocoric pupils, a cranial CT scan was repeated showing again an acute extensive infarct, left fronto-temporo parietal infarct in MCA territory with secondary compression of lateral ventricle, progression of the left to right subfalcine herniation. The right lateral ventricle was now significantly enlarged and contained extensive intraventricular hemorrhage (Fig:2).

The final diagnosis was brain herniation with hydrocephalus due to extensive total anterior circulation infarction with intraventricular haemorrhage. The infarct mechanism is assumed to be due to cardioembolism and atrial fibrillation. Autopsy was not done.

DISCUSSION

The patient’s deteriorating GCS was initially attributed to a hemorrhagic transformation (HT) of the TACI of the Left cerebral hemisphere. Ischemic Stroke can lead to large infarct areas with a complex pathophysiology. Further breakdown of blood brain barrier after reperfusion can lead to hemorrhagic transformation (HT). In some patients, a large and symptomatic intracranial hemorrhage (ICH) can occur.  

Intraventricular hemorrhage is uncommonly seen with hemorrhagic transformation and should raise possibility of another process (such as hypertensive bleed or a ruptured arteriovenous malformation).  

Repeated unenhanced cranial CT scan revealed a primary right lateral ventricle intraventricular hemorrhage. The intraventricular hemorrhage was noted on the contralateral side of the infarct and there was no evidence of hemorrhagic conversion in the infarct area or subsequent breakthrough into the lateral ventricles.

Primary intraventricular hemorrhages have not previously been reported in association with concurrent cerebral infarction. Hypertension is the most common associated risk factor for PIVH from
vascular malformation. The etiology is varied and it should be emphasized that vascular malformations cause 34% and in 21-47% no cause is found. The PIVH here is not a complication of TACI and is likely due to hypertension associated with an unrelated choroid vessel pathology.

**CONCLUSION**

A case of total anterior circulation infarction in a 80 year old hypertensive female with subsequent development of an intraventricular hemorrhage is presented. The co-occurrence of total anterior circulation infarction and intraventricular hemorrhage is uncommon and possible causes were discussed.

**REFERENCES:**