



Cardiac Complications in Acute Ischemic Stroke

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Introduction

The majority of post stroke deaths are attributed to neurological and cardiac complications. There is an increase pool of evidence that suggest a causal relationship between brain damage and heart dysfunction. It is at times difficult to ascertain whether the cardiac dysfunction seen in patients with acute ischemic stroke is triggered by the stroke or is the underlying cause of the stroke.

Case Study

We present a 75-year-old African Arab male known hypertensive who was admitted with a history of sudden onset of right sided weakness and aphasia. He had normal vital signs except for tachycardia 119 beats per minute (bpm) and tachypnea (25b/m). Systemic examination was noted for prominent neck veins, a displaced apex at 6th intercostal space and apical grade III systolic murmur. The computed tomography scan of the head revealed an acute left basal ganglia infarct. An ECG done on the day of admission showed sinus tachycardia (139 bpm) with T- wave inversion in lateral leads. Other work ups included an Echocardiogram (ECHO) which showed: Dilated left atrium, dilated and hypertrophied left ventricle with an Ejection Fraction (EF) of 44%, elevated Troponins and BNP were also documented. On the 2nd day the patient became dyspnoeic and required oxygen support, a repeat ECG was remarkable for atrial fibrillations (162 bpm). Intravenous Furosemide 40 mg b.i.d, Digoxin 0.25 mg o.d, Losartan 50 mg o.d, Aspirin 75 mg o.d and Atorvastatin 40 mg nocte were administered [1,2]. Warfarin at a dose of 5 mg OD was also given (CHA2 DS2 VASc score of 6). On the fourth day he was doing better off oxygen support, chest was clear but was still tachycardic at a rate of 140 bpm. Propranolol at a dose of 40 mg b.i.d was added for rate control. He was discharged on the 7th day with a resting heart rate of 90 bpm.

Discussion

Cardiac dysfunction in the setting of acute stroke is not uncommon phenomenon. A number of cardiac complications have been reported after an acute stroke including heart attack, congestive heart failure, cardiac arrest and abnormal heart rhythm such as atrial fibrillation. This was the case in our patient who seems to have developed tachyarrhythmia (atrial fibrillation) and decompensated heart failure after an acute ischemic stroke. Many of the cardiac complications are preventable and thus early recognition and treatment can improve patients' outcomes.

References

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