ABSTRACT

Background:

To study the association between Aortic knob calcification (AC) and intracranial stenosis in acute ischemic stroke patients ischemic stroke patients using simple, non-invasive and routine chest radiography.

Methods:

In a study population of 102 acute ischemic stroke patients who were admitted under medicine department in Government Royapettah hospital/ Kilpauk medical college from April 2017 to September 2017 who underwent magnetic resonance angiography. The presence of AC was assessed in a chest radiograph posteroanterior view. The association of AC with IC stenosis was analyzed.

Results:

Patient mean age (63 vs 59 years, P=0.010) was higher in patients with intracranial stenosis, and the prevalence of IC stenosis (69 vs. 31%) were higher in patients with AC than in patients without calcification. After adjusting for age, gender and vascular risk factors, analysis showed that Aortic knob calcification (69%), Age (p=0.10), Diabetes (p<0.01), Hypertension (p<0.01), Smoking (p<0.01), Alcohol (p<0.01) were independent factors affecting IC stenosis.
Conclusions:

Using a simple, non-invasive and routine chest radiography, AC appears to be a reliable predictor for IC stenosis, an important mechanism of ischemic stroke.

Keywords:

Aortic knob calcification; Ischemic stroke; Atherosclerosis

Abbreviations:

AC-Aortic Knob Calcification, IC- Intracranial calcification,