

Cardiac evaluation of stroke in young patients

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Abstract

Objectives: To evaluate cardiac cause of stroke in young patients.it not only helps in identifying cardio embolic pathophysiology for ischemic symptoms but also identify concomitant coronary artery disease. **Materials and Methods:** 32 patients in the age group of 18-45 years with documented ischemic stroke were included in the study for various relevant investigation. **Results:** electrocardiogram was abnormal in 5(15.6%).Holter helped in identifying abnormal rhythm in 2(6.2%) out of which one patient had atrial fibrillation .Trans esophageal echocardiogram revealed spontaneous echo contrast in 2(6.2%)patient. **Conclusion:** In our series of cardiac evaluation of stroke in young the risk factor profile revealed significant importance for evaluation of cardiac disease which was seen in <10% of study population.

Keywords: Cardiac evaluation, stroke.

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RESULTS

The mean age of patients was 32.8 ± 4.52 years with a male preponderance (60%).electrocardiogram was abnormal in 5(15.6%) that included left ventricular hypertrophy by voltage criteria, significant q wave and t wave inversion with ST T changes. ischemic heart disease was identified in 1(3.1%) patient. Holter helped in identifying abnormal rhythm in 2(6.2%) out of which one patient had atrial fibrillation. Trans esophageal echocardiogram revealed spontaneous echo contrast in 2(6.2%)patient of whom one patient had rheumatic heart disease with severe mitral stenosis.

Table 1

| | Abnormal |
|-------------------|----------|
| electrocardiogram | 5(15.6%) |
| echocardiogram | 1(3.1%) |
| holter | 2(6.2%) |
| TEE(SEC NOTED) | 1(3.1%) |

Table 2: Risk factors for stroke in young patients

| Risk factors | No of pts (%) |
|-------------------------|---------------|
| Hypertension | 6(18.75%) |
| Infective endocarditis | 5(15.6%) |
| Dyslipidemia | 2(9.5) |
| Takayasu arteritis, | 1(3.12%) |
| Rheumatic heart disease | 1(3.12%) |

INTRODUCTION

To evaluate cardiac cause of stroke in young patients.Cardiac evaluation in stroke patients are Not only helps in identifying cardiac and aortic origin emboli but also helps in identifying concurrent coronary heart disease that can have significant morbidity and mortality

MATERIALS AND METHODS

This is a prospective cross sectional study 32 patients in the age group of 18-45 years with documented ischemic stroke were included in the study. They were subjected to clinical examination ,Electrocardiogram, echocardiogram and other test for cardiac evaluation.

DISCUSSION

All patients with stroke should undergo electrocardiogram and echocardiogram. Diabetes and hypertension are not more common among patients with lacunae¹. young patients with stroke of unknown cause are likely to benefit from aggressive cardiac testing². Trans esophageal echocardiography (TEE) was performed in all cases. TEE is the preferred initial test to localize the source of embolism in patients <45 years without known cardiovascular disease (i.e., absence of myocardial infarction or valvular disease history), patients in whom Transthoracic echocardiogram would be likely to be falsely negative, patients with atrial fibrillation and suspected left atrial thrombus and patients with a mechanical heart valve. Patients with TIA or stroke have a relatively high risk of MI and nonstroke vascular death³. ECG monitoring with an ICM was superior to conventional follow-up for detecting atrial fibrillation after cryptogenic stroke⁴. LAA dysfunction as determined by TEE (LAA-EF<49.1%) in the acute stage of stroke is predictive of PAF with moderate accuracy⁵.

CONCLUSION

In our series of cardiac evaluation of stroke in young the risk factor profile revealed significant importance for evaluation of cardiac disease which was seen in <10% of study population. On atherosclerotic cause of stroke was noted in these young study group which requires a larger population study to confirm these findings.

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