

Electrocardiographic assessment in Embolic Strokes of Undetermined Source

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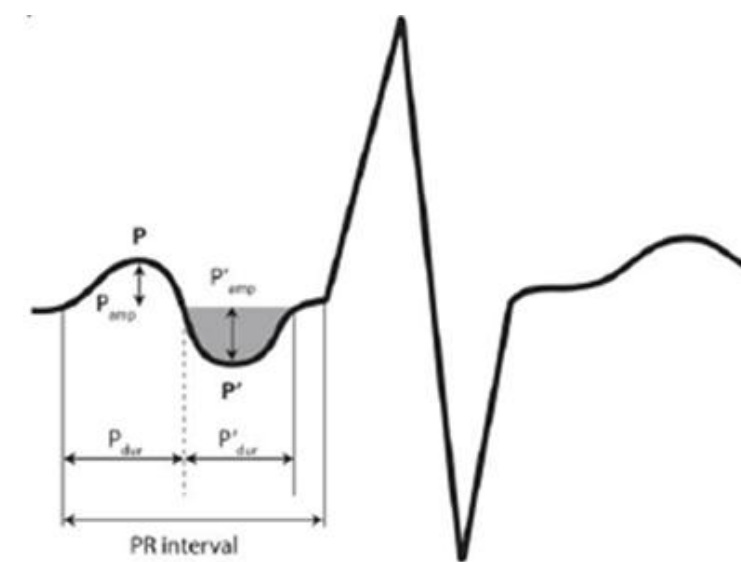
Background: Despite the importance to identify the etiology underlying stroke in order to establish the prognosis and tailor the treatment, one quarter of stroke patients have no probable cause found.¹

Aim: The purpose of this study was to characterize patients with Embolic Stroke of Undetermined Source (ESUS)² on the basis of the electrocardiographic characteristics.³

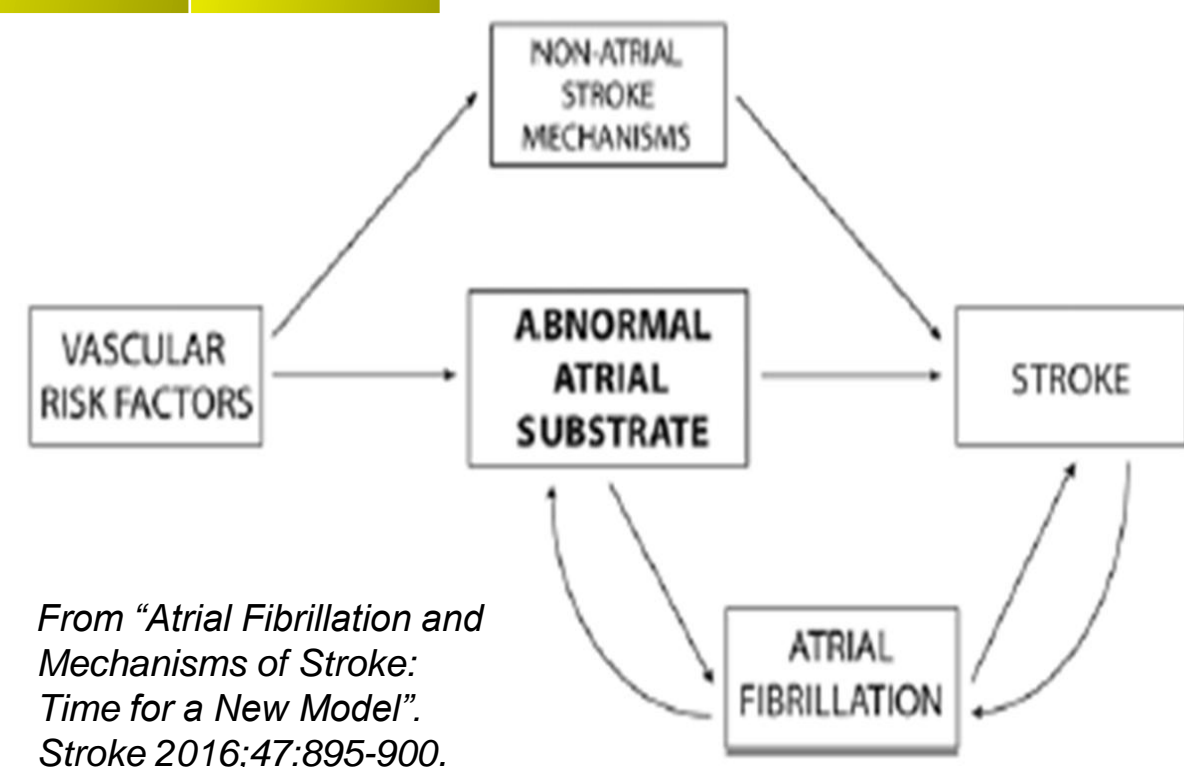
	Full Cohort	Normal PTFV ₁	Increased PTFV ₁	p Value
Left atrial enlargement				
Mild	28 (25.7)	21 (26.9)	7 (22.6)	0.640
Moderate to severe	15 (13.7)	6 (7.7)	9 (29.0)	0.004
Left ventricular hypertrophy				
Mild	27 (24.8)	22 (28.2)	5 (16.2)	0.188
Moderate to severe	24 (22.1)	13 (16.7)	11 (35.5)	0.032
Left ventricular EF, %	60 (58-65)	60 (57-69)	60 (58-65)	0.448
Patent foramen ovale	25 (22.9)	22 (28.2)	3 (9.7)	0.038
Mitral/aortic valve calcification or stenosis	13 (11.9)	9 (11.5)	4 (12.9)	0.843
Unstable sub-stenotic atherosclerosis	29 (26.6)	25 (32.1)	4 (12.9)	0.041

Methods:

Consecutive patients who met the ESUS diagnostic criteria were retrospectively identified. Baseline and diagnostic work-up findings from electrocardiography, echocardiography and vascular imaging were collected.



Results: Higher rates of hypertension, history of prior stroke or TIA, moderate to severe left atrial enlargement and ventricular hypertrophy, and lower prevalence of patent foramen ovale and unstable sub-stenotic atherosclerosis of aortic arch and cranial arteries were found in the ESUS patients presenting with ECG-defined left atrial abnormality.



From "Atrial Fibrillation and Mechanisms of Stroke: Time for a New Model". Stroke 2016;47:895-900.

Conclusions: Left atrial cardiopathy was inversely associated with artery-to artery and paradoxical sources of stroke and could be involved in the ESUS pathogenesis.

References

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