



POSTER

Profitability of transthoracic echocardiogram in the identification of cardioembolic source for stroke

Inês Almeida¹, Joana Chin¹, Catarina Sousa¹, and João Tavares¹

From the Lisbon Stroke Summit, Lisbon, Portugal. 5–6 April 2019.

Abstract

Background: Ischemic stroke is one of the main causes of worldwide morbidity and mortality, with the identification of the underlying aetiology of great importance in order to prevent its recurrence. Cardioembolic sources (CES) are responsible for 20-30% of ischemic strokes, and transthoracic echocardiography (TTE) and 24 hours Holter are fundamental for its diagnosis.

Objectives: Characterization of TTE results for CES identification in the context of stroke: identification and description of CES and profitability of TTE.

Methods: Retrospective analysis of patient's files, who underwent TTE to evaluate the presence of CES in the context of ischemic stroke during the year 2016.

Results: 232 patients were evaluated, mean age 69.6 ± 11.9 years, 53.4% male. The most frequent co-morbidities were arterial hypertension (78%), dyslipidaemia (44.4%) and diabetes (34.5%). There is a known linear relationship between the left atrium area and the probability of atrial fibrillation / flutter (AF / FLA), this area was measured during TTE, the mean value was 18.5 ± 5.8 cm² (normal value <20 cm²). Only 7.9% of patients had previous diagnosis of AF / AFL. The majority of patients had preserved global systolic function (mean ejection fraction $66.3 \pm 13\%$, normal value >

50%). The findings in the TTE were divided into two groups: definite and indeterminate CES. Among the patients who presented definite CES, one patient presented an intracardiac mass suggestive of vegetation versus fibroelastoma, the first hypothesis confirmed with transesophageal echocardiography. 1.3% of the patients had mechanical valvular prosthesis in the mitral position, and the presence of thrombi in this location was excluded. No patient presented intracardiac thrombus, rheumatic mitral disease or cardiac tumour. Other potential CES with a modest risk of stroke (<2% / year) were relatively frequent echocardiographic findings, such as valvular disease, found in 64.2% of patients, with a documented presence of mild mitral insufficiency (26.7%), mild aortic insufficiency (24.1%) and mitral ring calcification (12.6%). In these situations, the causal relationship with stroke is not clearly established, being considered only possible risk factors, not altering the therapeutic behaviour. No patent foramen ovale, interatrial septum aneurysm, presence of spontaneous intracardiac contrast or left ventricular aneurysm were found.

Conclusions: The identification of definite CES is fundamental for patient management, yet it occurs in a small percentage of cases, in our study only in 0.4%, in all other cases standard management is recommended.

¹Cardiology Department - Centro Hospitalar Barreiro-Montijo

Citation: Almeida et al. Profitability of transthoracic echocardiogram in the identification of cardioembolic source for stroke. International Journal of Clinical Neurosciences and Mental Health 2019; 6(Suppl. 1):P16

Published: 04 April 2019

