



POSTER

# Indications for transoesophageal echocardiogram in the research of cardioembolic source for stroke

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

## Abstract

**Background:** The identification of cardioembolic source (CES) in ischemic stroke is traditionally based on the use of transthoracic echocardiography (TTE). In selected cases, especially in the presence of doubtful findings in TTE or in the absence of etiological identification after extensive diagnostic testing, especially in young patients, transoesophageal echocardiography (TEE) may be important for a better morpho-functional cardiac characterization.

**Objectives:** Characterization of TEE results for CES identification in the context of ischemic stroke: identification of the existence and description of CES and profitability of TEE in this process.

**Methods:** Retrospective analysis of patients' data admitted with diagnosis of ischemic stroke in 2016, who performed TEE to clarify definite or probable CES identified in TTE.

**Results:** 232 patients were admitted with a diagnosis of ischemic stroke, mean age  $69.6 \pm 11.9$  years, 53.4% male. The most frequent co-morbidities were arterial hypertension (78%), dyslipidaemia (44.4%) and diabetes (34.5%). All

patients underwent TTE and subsequently 8.2% of those underwent TEE, either due to findings in the TTE that were considered to deserve better characterization by TEE or persistence of a high suspicion of CES in the absence of another etiologic cause for stroke during the diagnostic process. Patients who had TEE had a lower mean age ( $60.5 \pm 9.2$  years), 52.6% female. One patient presented an intracardiac mass suggestive of vegetation versus fibroelastoma, the first hypothesis confirmed with TEE. The findings in the TEE were divided into two groups: definite and probable CES. The identification of cardiac vegetation was the only case in which a definite CES was found. In the remaining cases, 21.1% of the patients had simple atherosclerotic plaques in the aortic arch. In 5.3% each of the following situations were identified: presence of left atrial spontaneous auto-contrast, atrial septal aneurysm, atrial septal defect and patent foramen ovale.

**Conclusions:** TEE, as an invasive and non-risk-free exam, should be reserved for patients in whom the suspected cardioembolic source remains elevated after a TTE and despite normal etiologic investigation.

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Citation: Almeida et al. Indications for transoesophageal echocardiogram in the research of cardioembolic source for stroke. International Journal of Clinical Neurosciences and Mental Health 2019; 6(Suppl. 1):P15

Published: 04 April 2019

