Correspondence

Transoesophageal echocardiography and stroke: An overview

Dear Editor,

We read the article entitled "Usefulness of transoesophageal echocardiography in ischaemic stroke"[1] with great interest. Shivajirao *et al.* retrospectively studied the transoesophageal echocardiogram (TEE) features in 500 individuals with ischaemic stroke. The majority of the patients were males with a predominance of 2.6, and the majority of the abnormalities were seen in the arch and descending aorta. They concluded that the TEE was useful for the embolic source diagnosis, so it allows early starting of anticoagulation. Moreover, TEE was found to be important for identifying aortic atheroma.[1]

Here, we would like to provide the mnemonic "TRANSESOPHAGEAL" to help remember the main facts related to transoesophageal echocardiography and stroke: Tracheal interposition causes a blind spot, so a small part of the aorta may not be visualized by TEE; Routinely performed in patients with posterior fossa and cryptogenic due to high association with cardioembolic source; Atheromatous process evaluation of the vascular tree; Noncooperative patients should not undergo to TEE; Structures of the valves, mainly mitral valve on stroke setting; Embolic stroke of undetermined source (ESUS) without large patent foramen ovale (PFO) often has biomarkers of cardiac dysfunction; Septal aneurysm of the atrium; In older patients, TEE has a high diagnostic value, but it has a minimal incremental effect on management; PFO ≥4 mm of diameter is significant for stroke; Heavy/dense smoke in the left atrium suggests a low blood flow velocity that could lead to formation of emboli; Adverse events are rarely reported in association with TEE and also those patients who have a complication are due to unsuspected pre-existing oesophageal disease; Gold standard for the evaluation of potential proximal sources of emboli; Echocardiogram standard within normal values, but highly suspicious of cardioembolic source, a TEE should be done; Atrial myxoma that is the most common tumour of the heart; Left atrium anatomy and appendage searching from thrombi.[1-4]

Tateishi *et al.*[5] recently presented a poster in the International Stroke Conference 2019. Their study[5] aimed to evaluate the cardiac function in patients with ESUS in relation with a large PFO. One hundred and sixty-three individuals who were included had ESUS and performed TEE, of these 24 had large PFO. The authors[5] observed that patients without large PFO had higher levels of brain natriuretic peptide. The authors suggested that patients without large PFO probably have worst outcomes when compared to those patients who have ESUS and large PFO.[5]

Schwartz *et al.*[6] evaluated the routine utility of the TEE in 219 stroke patients. They concluded that only in a small percentage of the patients, the TEE found relevant findings, and even in these patients, the majority of them the management was not modified. In this way, we do not have a premise to justify the performance of TEE for every patient, but probably in ambiguous cases or highly suspicious, the TEE should be done.[6]

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Conflicts of interest
There are no conflicts of interest.

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