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Letter to the Editor

Comment on "Concomitant fat embolism syndrome and pulmonary embolism in a patient with patent foramen ovale"

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Dear Editor,

We read the case report "Concomitant fat embolism syndrome and pulmonary embolism in a patient with patent foramen ovale" authored by Yeak and Liew with great interest (1). Authors have elaborately described the possibility of paradoxical embolism in case of the presence of concomitant fat embolism syndrome (FES), pulmonary emboli (PE), and patent foramen ovale (PFO) with this very demonstrative case. However, we do not agree with the authors about the conclusion. The authors propose performing routine echocardiography to all pulmonary embolism cases to exclude PFO which may predispose to paradoxical embolism but do not suggest to take further action if diagnosed. We think the necessity of this diagnostic proposal is contradictory.

First of all, it is unclear which echocardiography method the authors are proposing. If performing transthoracic echocardiography (TTE) is proposed as in this case, it should be noted that transesophageal echocardiography (TEE) is considered to be the golden standard in the diagnosis of PFO (2, 3). TEE, on the other hand, is a semi-invasive intervention that although rare may cause bleeding, aspiration, and perforation (4). Yet, neither of these methods is 100% sensitive. In this regard, European Society of Cardiology, in its recently published position paper, does not advise routine scanning for PFO and suggests diagnostic studies only for deciding on treatment (5). In this report, however, the authors do not offer any management or any preventive measures for paradoxical embolism if PFO is detected. It is known that PFO is present in at least 25% of adults and contributes to 95% of right to left shunts. Thus, it is expectable to detect PFO in one-fourth of all fat embolism syndrome cases as well. We think that the clinical relevancy of performing a diagnostic method that is not 100% sensitive and may have serious side effects for a condition that is already known to be respectively frequent is arguable and does not go beyond academic interest unless a management approach or behavioral changes are advised if detected.

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Author's response:

As I mentioned in the article, in select cases, patent foramen ovale (PFO) closure reduces the risk of recurrent stroke in young patients (1). The European Society of Cardiology, in its recently published position paper suggests diagnostic studies only for deciding on a treatment (2). It was suggested to perform percutaneous closure of a PFO in carefully selected patients aged from 18 to 65 years with a confirmed cryptogenic stroke, transient ischaemic attack, or systemic embolism and an estimated high probability of a causal role of the PFO as assessed by clinical, anatomical and imaging features (2).

In our paper, we decided that the most appropriate treatment was oral anticoagulant to prevent paradoxical embolism (3).

According to the european position paper on the management of patients with patent foramen ovale, there is no gold standard for diagnosing PFO (2). A combination of transthoracic echocardiography (TTE) and transesophageal echocardiography (TEE) may be required. We do agree that TEE is a semi invasive intervention that may rarely cause bleeding, aspiration and perforation. Thus, it should be performed by experienced operators in PFO assessment as suggested by the european position paper (2).

We feel that by performing routine echocardiography in patients with PE through a combination of TTE and TEE, select patients with high probability of having a pathogenic PFO may benefit from the PFO closure which will reduce its recurrence rate. Furthermore, knowledge of a PFO may influence the decision of duration of anticoagulant therapy. In view of these, routine echocardiography goes beyond academic interest as it is of benefit for patients with pathogenic PFO.

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