Diagnosis of Pulmonary Thromboembolism in Psychiatric Patients

To the Editor: Mortality from cardiovascular causes, including pulmonary thromboembolism, is the second most common cause of mortality in psychiatric patients.[1] Intermittent shortness of breath, chest pain, and tachycardia are the most common symptoms of pulmonary thromboembolism,[2] but many of these symptoms also accompany the experience of anxiety. The diagnosis of pulmonary thromboembolism in psychiatric patients is substantially confounded by the presence of anxiety symptoms.

Case report. We treated a 21-year-old woman following an overdose of 40 mg of diazepam. At presentation in 2010, apart from tachycardia (105 bpm), examination revealed no abnormalities. She gave a history of depressive and anxiety symptoms since the birth of her son 18 months before presentation and was on duloxetine 60 mg/d. During her admission, on 4 occasions she reported feeling anxious and tired and was found to be hyperventilating. On those occasions, she was tachycardic (110–123 bpm) and tachypneic (20–24 breaths/min) and had an oxygen saturation of 97%–99% on room air. On each occasion, it was explained to her that she was experiencing anxiety and was given 2.5 mg of diazepam with good effect. She was reviewed by the ward physician, and apart from tachycardia examinations, revealed no abnormalities. A few hours prior to her discharge (after a 3-day admission), she again reported similar symptoms and collapsed. All efforts to resuscitate her failed. Pulmonary thromboembolism was identified on postmortem examination as responsible for causing her death.

This patient had an intermediate clinical probability of pulmonary thromboembolism as per the Revised Geneva Score for the prediction of pulmonary thromboembolism, although she had none of the risk factors or symptoms defined therein.[3] However, both the presence of a psychiatric disorder and exposure to antidepressants are risk factors for pulmonary thromboembolism not considered in this risk stratification.[4]

Also, as clarified from her family after her death, she had never experienced hyperventilation or tiredness when anxious previously. It is important to note that most psychiatric patients with anxiety can describe the experience of anxiety that is typical for them.

On the basis of the above, we suggest that even in psychiatric patients with low or intermediate clinical probabilities for pulmonary thromboembolism, the presence of atypical anxiety symptoms should lead to a high index of suspicion for pulmonary thromboembolism. In this setting, a normal enzyme-linked immunosorbent assay D-dimer result avoids further testing.[5]

Further studies are needed to appropriately incorporate the presence of psychiatric disorder and exposure to antidepressants and/or antipsychotics in scoring systems for pulmonary thromboembolism.

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Rahul S. Bharadwaj, MD
Rahul.Bharadwaj@sswahs.nsw.gov.au
Teresa B. Slade, MBChB, MRCPsych

Author affiliations: Department of Emergency Medicine and Psychiatric Emergency Care Centre, Campbelltown Hospital, Campbelltown, New South Wales, Australia.

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