Sir,

We read with interest the informative case report regarding the role of thrombolysis in massive pulmonary embolus (PE) in the Irish Medical Journal by Nagi and Hayes. We agree with the authors that the role of thrombolysis in PE is still unclear. The article does, however, raise several important issues regarding the use of diagnostic images in medical literature without direct input from a radiologist. The authors provide pre- and post-thrombolysis images from a computed tomography pulmonary angiogram (CTPA) protocol and claim that there is a significant improvement in clot burden following anticoagulation. The images provided are not comparable, being taken at different anatomical levels thus preventing direct correlation. Furthermore, it is accepted practice that angiographic images are viewed with wide window settings allowing more accurate assessment of intraluminal clot. On the images provided there remains a large clot burden that cannot be said to have significantly improved following treatment. Indeed, in the post-treatment image no contrast is appreciated in the lower order pulmonary arteries and there has been interval development of a right side pulmonary infarct. The use of clot burden as a radiological assessment of pulmonary embolus is controversial.

Several scoring systems exist and although originally used for conventional pulmonary angiography have been adapted to be used with CTPA protocols. The main limitation in the assessment of clot burden is that it does not consider the other factors in pulmonary vascular resistance. The release of vasoactive agents, reflex pulmonary artery constriction, systemic arterial hypoxia all contribute to pulmonary vascular resistance as does the presence of multiple clots in lower order pulmonary arteries not visualised by imaging. It is for these reasons that the assessment of clot burden has been excluded from the new American College of Physicians Evidence Based Clinical Practice Guidelines, which instead focuses on clinical findings and assessment of right heart strain, either by CT or echocardiography. Medical images are now readily available to all medical personnel via PACS and are rightly included in many published articles. Nevertheless it is vital that the radiology department is consulted prior to submission of articles such that the most appropriate images are selected and published in the correct format making interesting and informative cases like the one published by Nagi and Hayes conform to international standards.

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References