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Letter from the Editors

As Drs. Bailey and Roach point out in their guest editorial, Ventilation/Perfusion (V/Q) imaging for pulmonary embolism (PE) has shown a progressive decline in popularity in the United States over the past 2-3 decades.[1] This is attributable to several factors. Foremost is its lack of availability because most Nuclear Medicine departments close at the end of the normal working day from 5-6 p.m. The argument that computed tomographic pulmonary angiography (CTPA) is more sensitive than V/Q in detecting PE is irrelevant when one realizes that patient outcomes comparing the two procedures are practically identical.[2,3] This confirms the fact that the additional 5-6% PE detected by CTPA are not clinically significant. In fact, a recent policy statement released by the American College of Chest Physicians states that small subsegmental PE not associated with deep venous thrombosis (DVT) are best handled by surveillance rather than anticoagulation.[4]

The Society of Nuclear Medicine and Molecular Imaging (SNMMI) recently published an Appropriote Use Criteria (AUC) report clearly favoring the use of V/Q for most clinical scenario in patients suspected of having PE.[5] The credibility of this report is greatly enhanced by the fact that its multidisciplinary panel consisted of pulmonologists, chest surgeons, critical care and emergency department physicians, chest radiologists and nuclear medicine physicians. Soon after its release, the AUC was endorsed by the American College of Emergency Physicians (ACEM).[6]

In the past several years, there has been a great rise in the use of V/Q to detect chronic PE in patients who present with pulmonary hypertension. It is generally accepted than V/Q is superior to CTPA in detecting chronic PE.[7-9] At Montefiore Medical Center, we have witnessed a steady rise in outpatients sent from pulmonologists to rule out chronic PE in patients with newly discovered pulmonary hypertension.

This issue of Seminars goes one step further in the use of V/Q imaging as it explores its newer applications for a variety of lung disorders beyond PE. As the guest editors point out, this functionally based study provides regional spatial information not obtainable from standard pulmonary function studies. Although most U.S physicians, including one of these editors (LMF) have favored the use of planar imaging for PE studies, it is quite possible that the use of single photon emission computed tomography (SPECT) is appropriate to better characterize the smaller regional abnormalities described in this discussion of non-PE pulmonary disorders.

We thank doctors Bailey and Roach and the authors of these most informative articles for sharing their expertise with us.

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