

Assessing the proper use of CTPA for suspected pulmonary embolism: a retrospective audit

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DOI: 10.24911/SJEMed.72-1740483485



Introduction:

Computed tomography pulmonary angiography (CTPA) is the go-to method for diagnosing suspected pulmonary embolism (PE), especially in patients with a high likelihood of the condition. The Royal College of Radiologists endorses CTPA due to its speed, conclusiveness, and availability, making it superior to isotope scanning in many cases.

Aims:

This audit aims to evaluate whether CTPA is being used correctly as the primary imaging test for suspected PE in our hospital, based on established referral guidelines.

Methods:

We retrospectively analyzed 178 patients (105 females, 73 males; aged 17–94 years) who were seen for suspected PE in January and February. We gathered data on patient demographics, referral details, clinical notes, adherence to local protocols, chest X-ray (CXR) results, D-dimer levels, and CTPA findings. The two-level Wells Score was used to gauge the likelihood of PE before testing.

Results:

Of the 178 patients, 13% had PE confirmed by CTPA, 59% had other diagnoses, and 28% had no significant radiological findings. The audit showed that while the use of CTPA is close to the target detection rate for PE, adherence to guidelines needs improvement. Specifically, there is a need for better documentation of the Wells Score and stricter compliance with established protocols.

Conclusion:

Our findings suggest that while CTPA is effective for diagnosing PE, adherence to the referral guidelines can be improved. The Wells Score should be routinely documented in patient notes, and D-dimer tests should only be conducted for patients with a Wells Score below 4.5. Additionally, a CXR should be performed before proceeding to CTPA to improve diagnostic accuracy.

Keywords:

CTPA, pulmonary embolism, Wells Score, diagnostic imaging, audit.