

3.04 Yield of CTPA in the diagnosis of Acute Pulmonary Embolism: A Single Centre Experience

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Background: There is increasing use of Computed Tomography Pulmonary Angiogram (CTPA) in recent years, being sensitive and specific for Pulmonary Embolism (PE). A normal CTPA result is shown to safely exclude PE. (1) The aim is to assess the PE positivity rate of CTPA in Mallow hospital. Low yield rate would indicate overuse of CTPA. CTPA is associated with up to 10mSV of radiation – approximately 137 chest x-rays. (2)

Methods: Patients presenting to Mallow Hospital Medical Assessment Unit (MAU) with suspected PE between January and June 2023 were included. Retrospective data was collected from Xero radiology system assessing for positive vs negative for PE. Imaging acquired from 64-row multi-detector CT system. CTPA requests and discharge letters used to collect data on main symptom reported.

Results: 52 patients included. 6 positive – yield rate 11.54%. Figure 1 represents percentages of patients presenting with the six most common symptoms into MAU.

Conclusion: Mallow Positivity rate is 11.54%. Positivity rates vary– US studies show rates as low as 2%, recent UK study showed 18.8%. (3) (4) Lower limit generally accepted as approx. 10% under which overuse should be considered. The Royal College of Radiologists recommends 15% - 30%. (5) Results indicate there is a role for a protocol in Mallow MAU for ordering CTPAs. Perc and Years scores not routinely recorded in MGH – recommended to use in Cork University Hospital on Emed.ie. Plan to implement algorithm for suspected PE in Mallow MAU (Figure 2).

Keywords: Pulmonary Embolism, CT Pulmonary Angiogram, Positivity rate.

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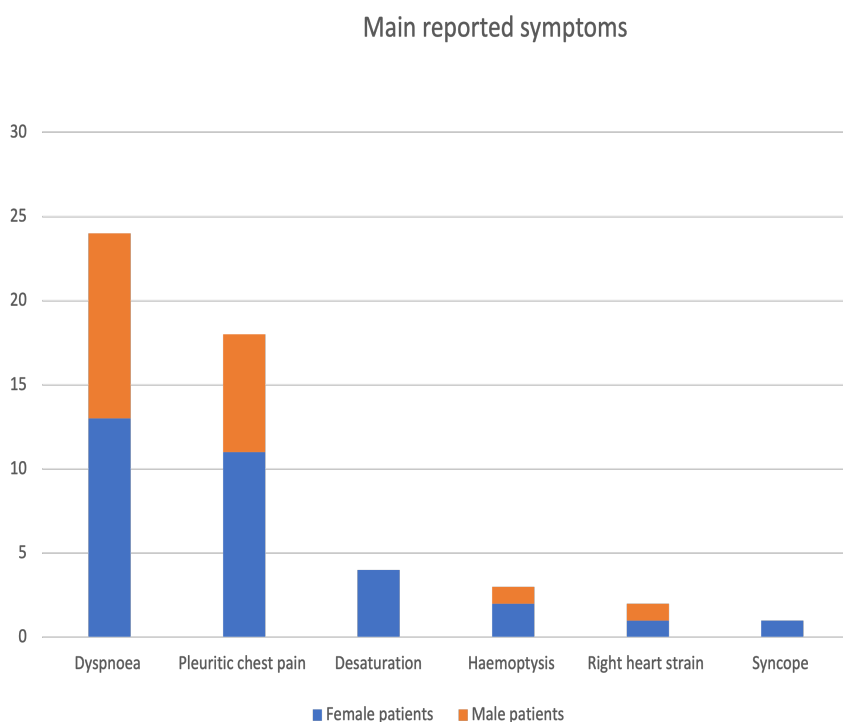
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Figure 1: Fig. 1 represents numbers (table) and percentages (text box) of patients presenting with the six most common symptoms into MAU further categorised into male and female patients



Dyspnoea - 47% of patients

Pleuritic chest pain – 34%

Desaturation – 7%

Haemoptysis – 6%

Right heart strain – 4%

Syncope – 2%

Figure 2: Algorithm recommended for use on Emed.ie website for Suspected Pulmonary Embolism

Wells/YEARS approach

