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Title: Clinical characteristics and outcomes of patients with clinically unsuspected pulmonary embolism versus patients with clinically suspected pulmonary embolism

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Body: Background: The routine use of multidetector computed tomography (MDCT) has led to increased detection of unsuspected pulmonary embolism (UPE). Our aim was to compare the characteristics and prognosis of patients with UPE to patients with suspected PE (SPE). Methods: We retrospectively reviewed the charts of patients diagnosed with PE in a community-based university hospital between the years 2002-2007. UPE was defined as PE detected on CT scans performed for indications other than PE. We compared patients with UPE to patients with SPE for differences in clinical features, ECG, imaging, and echocardiographic findings. We assessed the long-term outcomes of patients. Results: Of 500 patients with PE, 408 had SPE and 92 had UPE. Patients with UPE were similar to patients with SPE regarding age and sex distribution. Malignancy was more prevalent in UPE patients (39% vs. 23%, p< 0.0068). UPE patients had significantly less tachypnea, dyspnea chest pain, and hypoxemia. Mortality was higher in UPE patients (70.3% vs. 53%, p=0.0029). The mortality hazard ratio after adjustment for age, sex and malignancy was 1.546 (95% CI, 1.139-2.099, p=0.0052).

Conclusions: We suggest that UPE is more prevalent in patients with a malignancy and is associated with higher mortality despite a less severe clinical presentation. UPE may be a marker of poor prognosis.