ABSTRACT

Suspected Acute Pulmonary Embolism at the Emergency Department
Sahlgrenska University Hospital/Östra.

Master Thesis, Programme of Medicine, University of Gothenburg, Gothenburg.

Authors: Jacob Philipson, Henry Eriksson 2012.
Institute of Medicine, Sahlgrenska Academy University of Gothenburg Sweden.

BACKGROUND One increasing problem in diagnosing pulmonary embolism (PE) is the known fact that most patients suspected for acute PE are not confirmed by objective testing.

OBJECTIVE To study the prevalence of pulmonary embolism among patients examined with computed tomography pulmonary angiography (CTPA) for suspected acute PE. Describe and overlook how the doctors in the Emergency Department (ED) managed these patients with suspected acute PE. How are the recommended guidelines used in clinical practice?

METHODS A retrospective quality study reviewing medical records of 270 consecutive patients seeking acute medical care and who underwent CTPA examinations for suspected acute PE during 2010 at Sahlgrenska University Hospital SU/Ö.

RESULTS In 270 CTPA examinations, PE was confirmed in 36 (13%) patients and in 234 (87%) of the examinations PE was excluded. Dyspnea and chest pain were the two most common symptoms to why the physician raised a suspicion of PE. Among the causes of contacting the ED, dyspnea was significantly more frequent in the PE group compared to the non-PE group (72% vs. 51%, p=0.015). On the other hand, chest pain was significantly more common as a cause of contact among non-PE patients (55% vs. 31%, p=0.006). In the PE group dyspnea, leg swelling and leg pain were more common. Diagnostic algorithms including prediction rules and D-dimer tests were not used in a recommended way and risk stratifications of confirmed PE were not a common finding in the medical records.

CONCLUSIONS We strongly suggest the implementation of an organized diagnostic algorithm recommended in various clinical guidelines including pre-test probability and D-dimer tests in order to safely rule out PE and to reduce the number of negative CTPA.

KEY WORDS Pulmonary embolism, emergency department, diagnosis