

Introduction

Pulmonary embolism (PE) is defined as a thrombus which forms a part of the venous system, becomes detached, and lodges in a pulmonary artery after passing through the right chambers of the heart . The position of these emboli varies with the size of the thrombus and ranges from the pulmonary trunk to the subsegmental arteries. In the majority of cases , patients present with pulmonary emboli that are of different sizes and in multiple locations. (*Silverstein MD ,1998*)

Pulmonary embolism is important cause of patient morbidity and mortality . it is said to be responsible for 15% of all in-hospital deaths.(*Smith TP, 2003*)

The antemortem diagnosis of pulmonary embolism is difficult to establish clinically because the symptoms and signs are nonspecific and may be absent.(*Blachere H et al.,2000*)

Ventilation-perfusion radionuclide lung scanning was the most frequently performed non-invasive imaging study for the diagnosis of pulmonary embolism. But a large difference (25-30%)in interpretation among expert observers has been reported ,especially in the classification of low- or intermediate probability scans . The latter results necessitates further investigation to exclude or confirm pulmonary embolism . (*Blachere H et al.,2000*)

By 1998 ,all major CT manufacturers launched multiple-row detector (multislice) CT scanners.(*Mahesh M ,2002*)

The speed of scanning makes multislice CT well suited to the demonstration of thoracic vasculature, including pulmonary arteries and permits a shorter contrast medium injection , thus reducing contrast usage.(*Sutton D, 2002*)

It is also has the advantage of demonestrating the pleura parenchyma and mediastinum , which may reveal concurrent pathology or an alternative diagnosis . (*Schoepf UJ and Costello P ,2004*)

The sensitivity and specificity of CTPA for diagnosis of acute pulmonary embolism have been reported to range from 53% to 100% and 67% to100% respectively ,varying on the basis of patient selection, extent of thrombus, area of the vasculature imaged and experience of the reader.(*Remy Jardin M et al., 2003 a*)