

Original Communication

# Prevalence of pulmonary thromboemboli among referred cadavers having hospitalization records to Tehran Legal Medicine Center

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## Abstract

**Background:** Pulmonary thromboemboli are one of the main causes of sudden death especially in hospitalized patients and appeared with different nonspecific manifestations. The aim of this study was to determine the prevalence of thromboemboli.

**Materials and methods:** In this cross sectional study, pulmonary autopsies of 200 cadavers who were selected randomly from all cadavers with clinical suspicion of thromboemboli referred to Tehran University Tissue Archive in different months from January 2005 to 2006 and the prevalence of pulmonary embolism in these cases and its relation with demographic characteristics and sources of disease was assessed. Also, agreement degree of clinical and histopathological diagnosis of pulmonary embolism was calculated.

**Results:** The prevalence of pulmonary embolism was estimated at 13.5%. There were positive relationship between prevalence of pulmonary embolism and increased of age ( $P = 0.001$ ). Interpretation of results of macroscopic and histopathological studies for diagnosis of embolism showed moderate agreement ( $\kappa = 0.59$ ) and interpretation of results of clinical diagnosis of disease before death and pathologic findings after death showed poor agreement ( $\kappa = 0.34$ ). The most frequent detected location of emboli were end branches of pulmonary artery.

**Conclusion:** Considering the apparent high prevalence of pulmonary embolism in our study, we recommend increased use of anti-deep vein thrombosis measures in all appropriate patients within the Tehran hospital population, according to evidence-based guidelines.

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**Keywords:** Pulmonary embolism; Cadavers; Autopsy; Pulmonary infarction

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## 1. Introduction

Pulmonary thromboemboli are one of the main causes of sudden death especially in hospitalized patients and appeared with different nonspecific manifestations. There-

fore diagnosis of this complication is difficult in clinical wards. In half of the thromboemboli cases, this complication was diagnosed on the basis of autopsy.<sup>1</sup> Patient's age and background, source, size, and the final position of thromboemboli and pulmonary infarcts all have major roles in clinical manifestations of thromboemboli. Clinical symptoms as a method for diagnosis of thromboemboli have low sensitivity. Other methods such as pulmonary

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