A comparative study of the diagnostic accuracy of Wells criteria and D-dimer test in the diagnosis of pulmonary embolism in patients referred to Imam Khomeini Hospital in Ardabil during the last 5 years.

Abstract

Background: *Pulmonary embolism is an important clinical issue in patients and is often difficult to diagnose due to nonspecific clinical symptoms. On the other hand, performing CT lung angiography is expensive. Therefore, using auxiliary tests with less invasiveness and lower cost will be useful.*

Aim: *The aim of this study was to compare the diagnostic accuracy of Welsh Wells criteria and Di-dimer test in the diagnosis of pulmonary embolism in patients referred to Imam Khomeini Hospital in Ardabil during the last 5 years.*

Materials and Methods: *In this descriptive-analytical study, the records of patients who referred to the emergency department of Imam Khomeini Hospital in Ardabil with a possible diagnosis of pulmonary embolism and underwent computed tomography angiography and perfusion scan of the lungs were reviewed. The lists were entered and entered into the software and analyzed.*

Results: *27.1% had a definite diagnosis of pulmonary embolism. 55.9% of patients were women. The most common underlying disease was HTN. According to Chi-square test, there was a statistically significant relationship between gender and positive CT angiography (p <0.05), the odds ratio was higher in men. There was a significant relationship between Wales score and CT scan results (p <0.05) and there was no significant relationship between Wells score and dimer results. In this study, the sensitivity and specificity of dimer to CT scan were 96 and 36%, respectively. Also, the sensitivity and specificity of the Wells test were 86% and 24.3%, respectively. The results of this study indicated the role of blood pressure and malignancy and the role of diabetes, pregnancy, CHF and COPD.*

Conclusion: *The results of this study showed that clinical symptoms and dimer have a small diagnostic role and the use of clinical symptoms, Wells and dimer score and comorbidities together can increase the accuracy of diagnosis.*

Keywords: *Wells Criteria, D-dimer, Pulmonary embolism, CT angiography*