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ABSTRACT N. CO03

TEV E PATOLOGIE CARDIOVASCOLARI

EARLY DISCHARGE AND HOME TREATMENT OF LOW-RISK PULMONARY EMBOLISM: A COHORT STUDY.

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BACKGROUND AND AIMS

Pulmonary embolism (PE) is a common condition with a wide variety of clinical presentations and severities, making early mortality risk assessment essential to defining the most appropriate management strategy. Guidelines agree on the possibility of early discharge for patients who, based on clinical presentation, imaging, and laboratory data, present a low risk of complications. Despite evidence of efficacy and safety, home management is generally applied in only 7% of patients.
The aim of this study is to analyse the characteristics and the management of patients with low-risk PE who received this diagnosis at the Emergency Department (ED) of Ospedale di Circolo (Varese).

METHODS

This retrospective study evaluates data from patients diagnosed with low-risk pulmonary embolism according to the European Society of Cardiology (ESC) 2014 guidelines between January 1, 2019, and June 30, 2024 at the Emergency Department of Ospedale di Circolo in Varese. We analysed hospitalization and discharge rates, along with safety outcomes such as 7-day and 30-day mortality, recurrent venous thromboembolism (VTE), and major bleeding (MB) within 30 days.

RESULTS

We analysed data from 102 patients (21.1% of the total of 483 patients) with a low-risk classification based on Pulmonary Embolism Severity Index (PESI) or simplified PESI when data regarding the PESI score were missing. 65 (63.7%) of these patients were male and the mean age was 57.6 years (± 14.9).
26 patients (25.5% of patients classified as low risk according to ESC 2014) were discharged after a maximum 96-hour observation period in the Emergency Department, receiving anticoagulant therapy with Direct Oral Anti-coagulants (DOACs) in 71.1% of cases. Discharged patients had higher values of SpO2 (96,9 ± 1,7%) and lower rates of other acute medical illnesses requiring admission.
Applying the ESC 2019 guidelines criteria resulted in a sample of 61 patients (59.8%), which showed no significant differences compared to the original population; 23 (37.7%) of these patients was discharged from the ED.

After applying Hestia Criteria to the population of 102 patients, 32 patients (31.4%) had 0 criteria and were therefore suitable for early discharge (Table 1)

No deaths, recurrent VTE or MB complications were recorded within 30 days.
Among 381 patients not classified at low risk of adverse outcomes according to ESC 2014, 39 (10.2%) were discharged within 96 hours. Of those, 2 patients who were already known as terminally ill experienced death, none had recurrent VTE and 1 patient with colon cancer experienced MB at 30 days.
Overall, 65 patients (13.4% of the total number of PE patients) were discharged home within 96 hours.

CONCLUSIONS

This study demonstrates that early discharge is feasible in low-risk patients without significant adverse events. The adoption of predefined protocols and the development of an extra-hospital care network could further support this management strategy.

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	ESC 2014		ESC 2019		HESTIA criteria = 0	
	Total = n	Discharged = n (%)	Total = n (%)	Discharged = n (%)	Total = n (%)	Discharged = n (%)
Low risk patients	102	26 (25.5%)	61 (59.8%)	23 (37.7%)	32 (31.4%)	23 (72.8%)