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Pulmonary embolism associated with neoplasia: what are the distinctive features and predictive factors?

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Introduction

Pulmonary embolism (PE) is a serious condition that can be asymptomatic but life-threatening. The underlying conditions are diverse and require a well-codified investigation, particularly for neoplasia. Few studies have focused on PE associated with neoplasia. The aim of this hospital series is to describe the clinical, biological and therapeutic features of paraneoplastic PE.

Methods

a retrospective descriptive study of patients hospitalized in an internal medicine department for PE between 2009 and 2022 and in whom the neoplastic origin of the PE was identified. Clinical, biological and etiological features were studied.

Results

- We enrolled 25 patients who accounted for 26% of all PE cases (n=96).
- The mean age was 64.2 years [35-95].
- A female predominance (sex ratio F/H =1.5).

Relevant history findings

- Risk factors and a history of a thrombotic event in 44% and 16% of cases respectively.
- Cardiovascular risk factors were identified in 40% of cases.
- PE was concomitant with deep vein thrombosis (DVT) in 44% of cases.

Clinical signs : mainly dyspnoea and chest pain.



Chest angiography confirmed PE in all cases.

Biology :

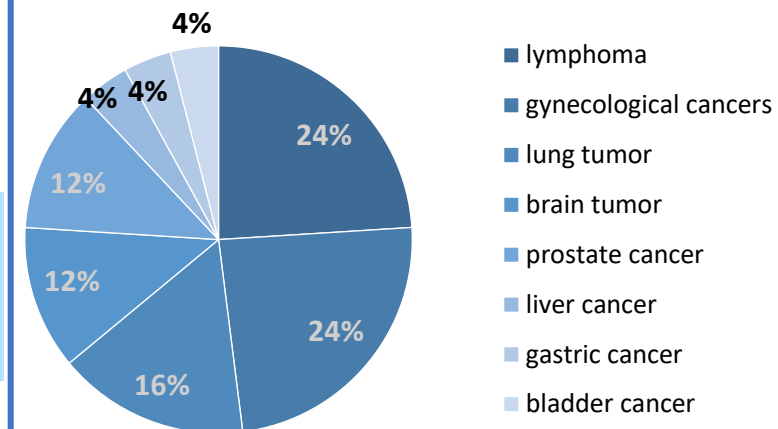
- showed anemia (68%)
- bio inflammatory syndrome (24%)
- renal dysfunction (4%).

Anticoagulant treatment was prescribed for all patients.

Comparison of patients diagnosed with neoplasm with other patients showed that patients with neoplasm were older and had more associated DVTs, but with no statistically significant differences.

The only factor predictive of neoplasm was the presence of anemia (p=0.016).

Types of cancer associated with PE



Conclusion

Pulmonary embolism is a life-threatening condition. An etiological investigation is mandatory after initiation of anticoagulant therapy. This study highlights the frequency of PE associated with neoplasm, and confirms the importance of introducing a screening strategy for early treatment of these frail patients, particularly in the presence of anemia, in order to improve the outcomes.