

# Pulmonary embolism complications in patients with acute stroke: the experience of the Stroke Unit at the G. Martino University Hospital in Messina

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## BACKGROUND

Management of patients with acute cerebrovascular events also includes attention to complications. For the prevention of deep vein thrombosis (DVT) and pulmonary embolism (PE) in high-risk patients, the use of low molecular weight heparin (LMWH) at prophylactic doses is indicated.

Despite adequate preventive measures, some patients develop these complications.

## MATERIALS AND METHODS

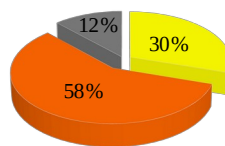
We evaluated patients with ischemic stroke admitted to the UOSD Stroke Unit in Messina between December 2020 and December 2024. All patients underwent clinical evaluations, blood chemistry tests, arterial blood gas analysis, cardiac examination, chest CT angiography, and venous Doppler ultrasound.

## RESULTS

Of the 1,472 inpatients, 31 (2.10%) had pulmonary embolism during their hospital stay while undergoing therapy with enoxaparin sodium 4.000 IU/day from the time of admission, as per the DVT prophylaxis regimen.

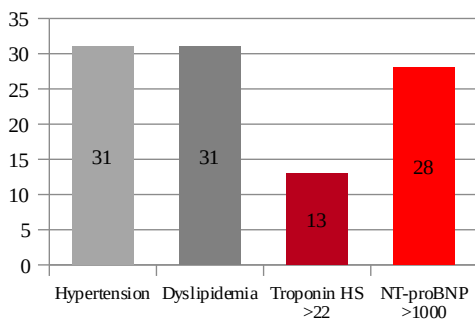
### PE Diagnosis

- Dyspnea
- Incidentally during CT angiography of the brain and supra-aortic trunks
- High D-dimero serum levels

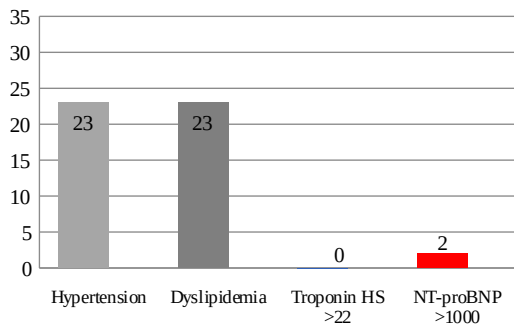


	PE (n=31)	NO PE (n=29)
M/F	11/20	11/16
Age (average)	75	77

### Patients with PE



### Patients without PE



## DISCUSSION AND CONCLUSIONS

Risk factors for pulmonary embolism in the general population are particularly represented by right heart dysfunction (of which serum NT-pro-BNP level is a marker) and increased troponin HS. Early identification of these biological markers could lead to a prediction of the risk of pulmonary embolism complications in patients with ischemic stroke.

### REFERENCES:

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- Eswaradass PV, Dey S, Singh D, Hill MD. Pulmonary Embolism in Ischemic Stroke. *Can J Neurol Sci.* 2018 May;45(3):343-345.