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### **Introduction:**

The incidence of acute stroke in the ED is increasing by up to 7% annually, well beyond that explained by the increase in average population size. Furthermore as statistical reports showed that the country with the highest rates of new strokes and deaths due to stroke is Romania. According to studies, the time elapsed from onset to reperfusion treatment is very important, and according to the current protocol, only those with onset up to 4.5 hours can perform thrombolytic therapy and/or up to 6 hours, mechanical reperfusion therapies such as thrombectomy.

### **Methods:**

The study was carried out in the Emergency Municipal Clinical Hospital, the second-largest hospital with about 30.000 annual ED patient visits. All patients included in this study presenting to the ED with signs and symptoms of stroke between January 1, 2019, to December 31, 2022, identified as stroke patients in time of thrombolysis were included.

### **Results:**

Of the 202 interviewed patients (Table 1), 104 (51.48%) presented late (>4.5 h) after onset of stroke and 98 (48.51%) presented early. Statistically significant correlations were observed between the higher frequency of right hemiparesis and patients who arrived after 4.5 hours (29.59% vs 40.38%, p=0.010) and between loss of consciousness and aphasia in patients who arrived early ( $\leq 4.5$ h) (13.26% vs 1.92%, p=0.004, respectively (61.22% vs 21.15%, p<0.001). Statistically significant risk factors associated with early arrival ( $\leq 4.5$  hours) were smoking and previous stroke/TIA.

### **Conclusion:**

Approximately 51,48 % presented after 4.5 h of stroke onset. Of the factors that contribute to the delay in admission to the ED after the onset of stroke symptoms, most can be overcome. To improve community awareness of the signs and symptoms of stroke, health promotion campaigns are needed, and timely transfer to hospitals with thrombolysis facilities and effective use of the ambulance service are strategies that help early presentation to reperfusion treatment after stroke onset.

### **Table:**

Obesity	12 (5.94%)	8 (8.16%)	4 (3.84%)	0.120
Smoking	37 (18.31%)	25 (25.51%)	12 (11.53%)	0.005*
Alcohol	31 (15.34%)	16 (16.32%)	17 (16.34%)	0.986
Dyslipidemia	22 (10.89%)	8 (8.16%)	14 (13.46%)	0.7
Arterial hypertension	164 (81.18%)	73 (74.48%)	91 (87.5%)	0.670
Diabetes mellitus	53 (26.23%)	27 (27.55%)	26(25.0%)	1.00
Atrial fibrillation	40 (19.80%)	15 (15.30%)	25 (24.03%)	0.752
Anticoagulant treatment	34 (16.63%)	16 (16.32%)	18 (17.30%)	0.950