

HYPERGLYCEMIA INCREASES MORTALITY AT SEVEN DAYS IN TRAUMATIC BRAIN INJURY (TBI)



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OBJETIVES

This study tries to analyze if glycemia measured at an early stage in out-of-hospital patients is a predictor of mortality.

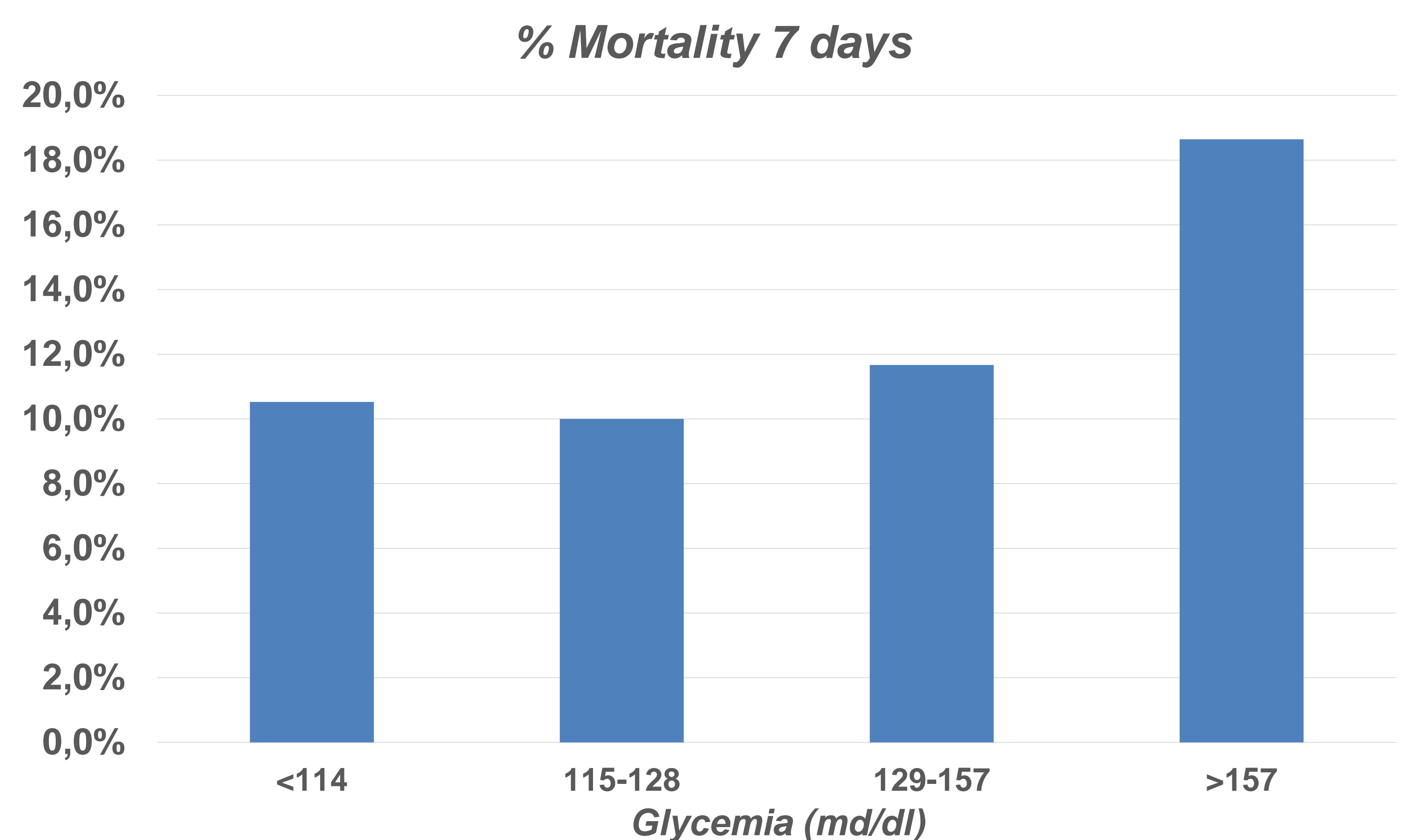
METHODS

A retrospective cohort study of patients with potentially severe TBI (in which poor prognosis is expected due to their injury mechanism) was designed.

Dependent variable: survival at 7 days

Independents variables: glycemia at the start of the patient's out-of-hospital care, divided by quartile of its distribution. Lactate, Revised Trauma Score, Glasgow Coma Scale, mean blood pressure, age and sex.

A logistic regression model was adjusted with the statistical program SPSS 20.0.



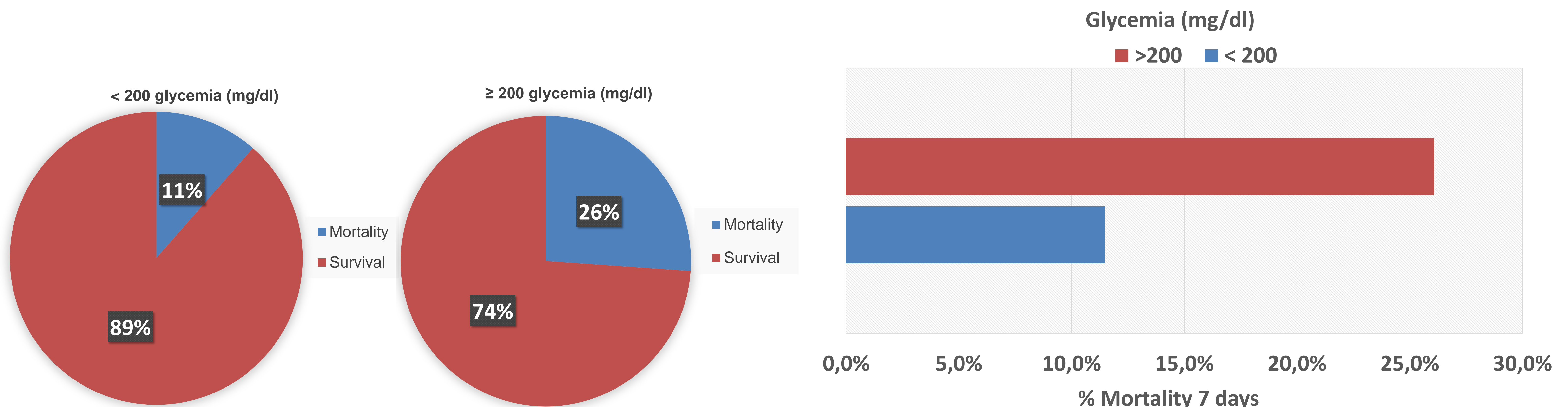
RESULTS

240 patients were analyzed from 2015 to 2018. The 74.9% were male. Mean age: 46 years old (SD 22.5).

Patients with glycemia levels >157mg/dl mortality is 18,6 %, with glycemia < 114mg/dl mortality is 10,5 %.

Mortality is 26.1% in patients with TBI and glycemia \geq 200mg/dl, compared to 11.3% in those with glycemia <200 mg/dl ($p=0.043$).

Adjusting this result for the rest of variables, mortality remained 2.74 times higher (95% CI, 0.95-7.87 $p=0.059$).



CONCLUSIONS

The study supports the results obtained in international series in hospitalized patients, so that our medical action should be oriented to an early treatment of hyperglycemia in this type of patients.

References

- 1: [Rau CS, Wu SC, Chen YC, Chien PC, Hsieh HY, Kuo PJ, Hsieh CH](#). Stress-Induced Hyperglycemia, but Not Diabetic Hyperglycemia, Is Associated with Higher Mortality in Patients with Isolated Moderate and Severe Traumatic Brain Injury: Analysis of a Propensity Score-Matched Population. *Int J Environ Res Public Health* 2017 Nov 3;14(11). pii: E1340. doi: 10.3390/ijerph14111340.
- 2: Bosarge, PL; Shoultz, TH; Griffin, RL; Kerby,JD. Stress-induced hyperglycemia is associated with higher mortality in severe traumatic brain injury. *J Trauma Acute Care Surg*.2015, 79, 289-294. [PubMed]