



The utility of prognostic models in pediatric Guillian Barre Syndrome: A regional cohort study –Ege

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INTRODUCTON

- Guillain Barre Syndrome (GBS) is an acute inflammatory neuropathic illness with striking clinical manifestations and significant morbidity.
- The modified Erasmus GBS Outcome Score (mEGOS) is a clinical model that predicts the risk of inability to walk in patients with GBS.
- The Erasmus GBS Respiratory Insufficiency Score (EGRIS) is a clinical predictive model developed to predict mechanical ventilator requirements among patients with GBS.
- These models' applicability in pediatric GBS is still unknown.

OBJECTIVES

To evaluate the utility of two prognostic models (mEGOS and EGRIS) in a pediatric GBS cohort.

MATERIAL & METHODS

- 36 children with GBS who were followed up for at least one year were included in the study.
- We evaluated the clinical values of the EGRIS and mEGOS scores for predicting following outcomes;
 - the need for an intensive care unit (ICU)
 - the assistance of mechanical ventilation (MV)
 - the inability to walk without assistance
 - the neurological deficits

RESULTS

Clinical features

The most common findings on admission were ;

- lower extremity weakness (88.9%)
- hyporeflexia/areflexia (77.7%)
- upper extremity weakness (66.7 %)
- pain (50%)

Uncommon clinical findings were ;

- 3 (8.3%) hyperreflexia
- 5 (13.8%) normoactive reflex
- 2 (5.5%) nuchal rigidity

The electrophysiologically subgroups of cohort were ;

- 21 (58.3%) AIDP
- 8 (22.3%) AMAN
- 2 (5.5%) AMSAN
- 5 (13.9%) unclassifiable

Outcome & Models

- Four (%11) patients needed MV, and eight (%22) patients needed ICU during the acute phase of their illness.
- Seven (%19) patients had neurological deficits at their last follow up.
- High EGRIS scores (>5 points) were associated with an increased risk for MV. ($r:0.585, p:0.001$). (Fig-1)

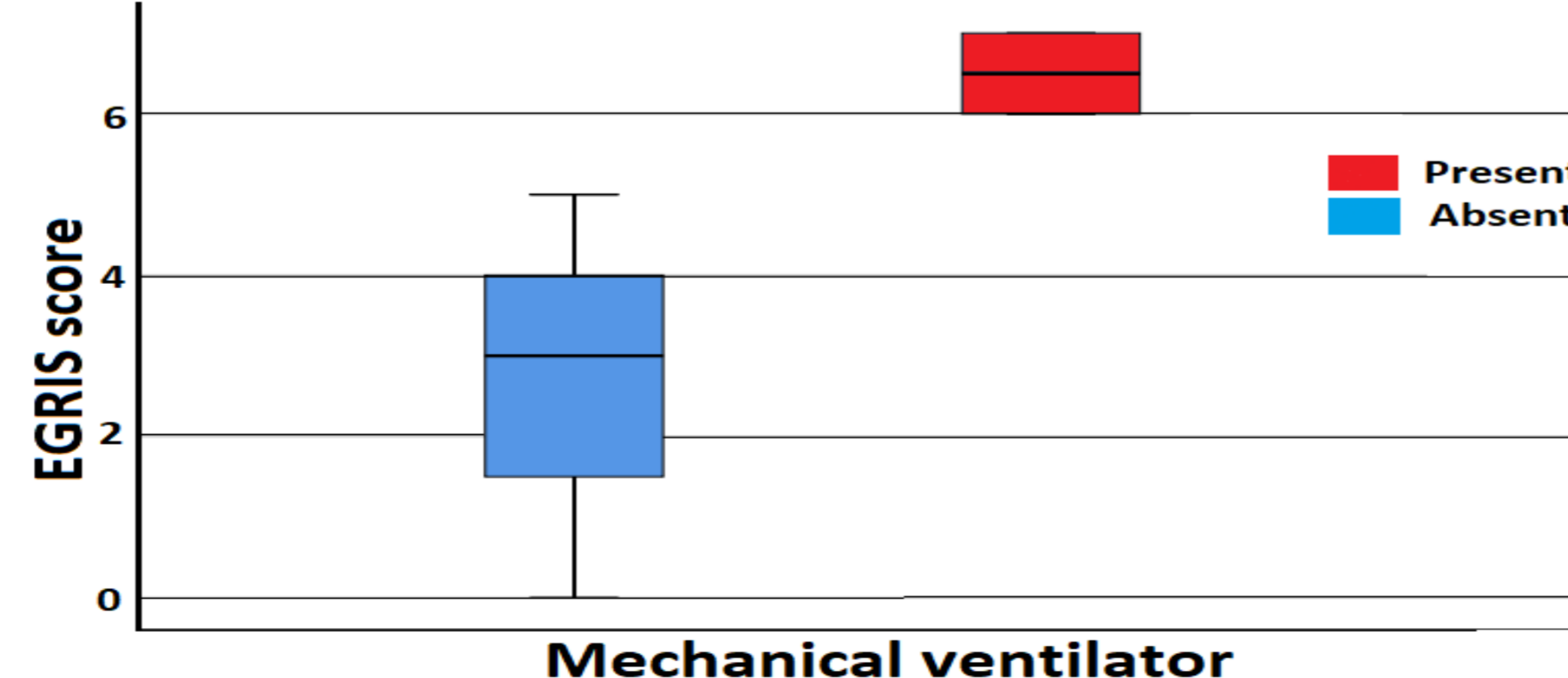


Figure 1: Mechanical ventilator and EGRIS

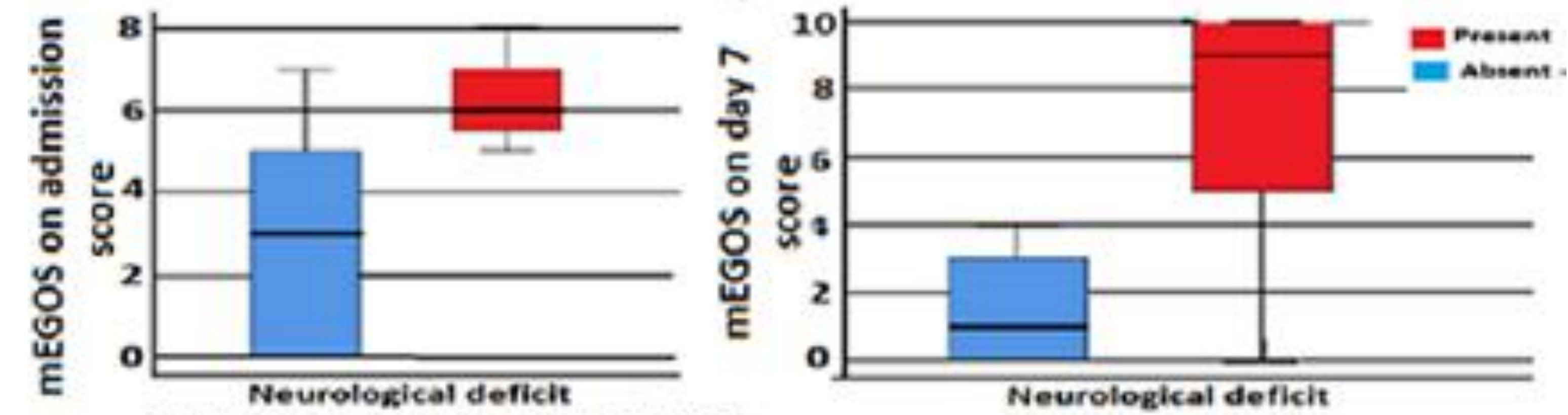


Figure 2: Neurological deficit and mEGOS

- A moderate correlation was found between the EGRIS score and the neurological deficit ($r=0.339$)
- High mEGOS scores on admission and on day 7 were moderately associated with neurological deficit (unable to walk independently at 6 months, tremor, muscle weakness). (Fig-2)
 - mEGOS on admission: $r=0.383$
 - mEGOS at day 7 of admission: $r=0.616$
- A moderate correlation was found between the mEGOS score and the need for mechanical ventilation
 - mEGOS on admission: $r=0.435$
 - mEGOS at day 7 of admission: $r=0.580$

CONCLUSION

The presented models (mEGOS and EGRIS) are practical and reliable prognostic tools in the presented pediatric GBS cohort.

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