

# **FOUR score accuracy versus GCS in predicting outcome in patients with cerebro vascular accident**

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## **Abstract**

**Background:** Stroke is one of the most common causes of adult disability worldwide. There is not a prognostic indicator to predict the outcome of patients with acute stroke. The GCS (Glasgow Coma Score) has been widely used as a prognostic measure, but it has been with limitations in these patients. The FOUR (Full Outline of UnResponsiveness) score, a new coma scale, has been proposed as an alternative for the Glasgow Coma Scale (GCS)

The aim of this study was to compare the performance of the FOUR score in predicting outcome of patients with acute stroke with the GCS.

**Methods:** We prospectively enrolled 150 patients with acute stroke presenting to the Emergency Department. FOUR score and GCS were rated at the time of admission. Patients were followed up through hospital discharge and at 3 months; functional outcome was measured using the Modified Rankin Score (MRS).

**Results:** Among the participants Initial mean GCS score was  $11.73 \pm 3$  and the mean FOUR score was  $13.92 \pm 2.8$ . Both FOUR score and GCS predicted functional outcome, with an inverse correlation with MRS ( $-0.547$  and  $-0.514$  respectively;  $p < 0.001$ ). We missed 44 patients through the follow up, but the correlation between the both scales with MRS was even more prominent after 3 months.

**Conclusion:**

The FOUR score is a valuable scale for evaluating the outcome in acute stroke patients, which has shown a great correlation with the GCS and MRS.