INTRODUCTION: Guillain-Barré syndrome (GBS) is a polyradiculoneuropathy characterized by a rapidly progressive bilateral paresis of the limbs. There is a limited number of studies in the literature which have explored the correlation between prognosis of GBS patients and serum albumin levels. So the present study was carried out.

MATERIAL AND METHODS: Prospective Longitudinal study was conducted among 60 patients admitted in the Neurology Department of MDM Hospital, Dr.SN Medical College, Jodhpur over a period of two years from January 2017 to December 2018. Serum albumin levels were determined. Patients were assigned into two groups. One with low albumin level (GROUP 1) and other with normal albumin level (GROUP 2). And the groups were compared based on Hughe’s disability scores.

RESULTS: The albumin levels were negatively correlated with the Hughes’ scores (admission/discharge). After treatment mean of the disability score in group 1 was significantly higher (p<0.05) as compared to group 2. The difference of means of disability score (end line - baseline) was significantly higher in group 1 (0.09) as compared to group 2 (-0.92).

CONCLUSION: This study determined albumin level as an independent factor for assessing the prognosis of GBS.

KEYWORDS
Guillain-Barré Syndrome; polyradiculoneuropathy; Serum albumin levels; Prognosis.
No significant relationship was found between S.uric acid, disability score before and after treatment. However the mean albumin levels were significantly higher in axonal subtype as compared to AIDP (Table 1).

**Table 1:** Comparisons of age, serum markers and disability score between AIDP and axonal subgroups

<table>
<thead>
<tr>
<th></th>
<th>AIDP (n=45)</th>
<th>Axonal (n=49)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>51.1±13.9</td>
<td>38.5±19.9</td>
<td>0.24</td>
</tr>
<tr>
<td>Serum Albumin levels</td>
<td>3.51±0.3</td>
<td>3.73±0.21</td>
<td>0.009</td>
</tr>
<tr>
<td>Serum Uric acid</td>
<td>4.53±0.98</td>
<td>4.89±0.63</td>
<td>0.17</td>
</tr>
<tr>
<td>CSF protein</td>
<td>81.22±62.76</td>
<td>120.32±90.31</td>
<td>0.06</td>
</tr>
<tr>
<td>Disability score</td>
<td>3.18±0.54</td>
<td>3.38±0.5</td>
<td>0.22</td>
</tr>
<tr>
<td>Disability score after</td>
<td>2.55±0.87</td>
<td>2.38±0.5</td>
<td>0.97</td>
</tr>
</tbody>
</table>

After treatment mean of the disability score in group 1 was significantly higher(p<0.05) as compared to group 2. The difference of means of disability score [end line - baseline] was significantly higher in group 1 (0.09) as compared to group 2 (-0.92). (Table 2). This showed the negative correlation of S.albumin level and Hughe's disability score.

**Table 2:** Comparison of means of Hughe's disability score in relation to S.albumin levels

- **Disability score**
  - **GROUP 1** (S.albumin<3.4 gm/dl)
  - **GROUP 2** (S.albumin≥3.4 gm/dl)
- **Baseline**
  - S.Group 1: 3.18±0.75
  - S.Group 2: 3.24±0.48
  - Difference (Baseline): 0.06±0.17
- **Endline (After treatment)**
  - S.Group 1: 2.32±0.59
  - S.Group 2: 2.33±0.59
  - Difference (Endline): 0.01±0.002
- **Score difference**
  - S.Group 1: 0.09±1.04
  - S.Group 2: -0.92±0.40
  - Difference (Score difference): -1.01±1.44

A cut-off S.albumin level of 3.5 predicted GBS, with 90% sensitivity and 75% specificity (ROC area under the curve [AUC] of 0.852, 95% CI, 0.712–0.992, p<0.001). (Table 1). Figure 1: Receiver Operating Characteristic Curve (ROC) analysis of S.albumin for prediction of GBS.

**Figure 1:** Receiver Operating Characteristic Curve (ROC) analysis of S.albumin for prediction of GBS.

In this study, the most common Nerve Conduction Study pattern was demyelinating type, and this was comparable to the previous studies by Tavee and coauthors⁷. The infectious event is described to appear in 40-70% of patients⁸-⁹. In our series up to 43.5% of cases have had the infectious event, and respiratory infection was the most frequent one among all these infections.

In a nutshell, decreased albumin levels at the time of presentation of patient are associated with worse outcomes according to our study. However even now larger prospective studies are needed to support the findings of this present study.

**REFERENCES**