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Tanruprubart Improves Health-Related Quality of Life in Patients With Guillain-Barré Syndrome Compared to Placebo

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INTRODUCTION

- Guillain-Barré syndrome (GBS) is a rare, rapidly progressive neuromuscular emergency that can affect anyone at anytime, often requires prolonged hospitalization and intensive care, and in some cases can be fatal[1]
- Approximately 25% of patients will progress to respiratory failure requiring mechanical ventilation[2,3]
- GBS is associated with life-long residual disability and a mortality rate of up to 10%[1-3]
- Long-term residual effects of GBS mean that patients often change their work and general lifestyle to adapt after acute recovery[4]
- GBS is typically a post-infectious disease in which antibodies cross-react with nerve components activating C1q and the classical complement pathway driving inflammation, motor neuron conduction block, nerve damage, and destruction[5]
- Tanruprubart (ANX005), a monoclonal antibody, is a targeted immunotherapy that selectively binds to and inhibits C1q, the initiating molecule of the classical complement pathway, thus providing rapid inhibition of complement-mediated neuroinflammation and nerve damage[6,7]
- GBS-02 (NCT04701164) was a Phase 3, multicenter, double-blind, placebo-controlled trial of tanruprubart in patients with GBS. The study met its primary endpoint demonstrating that patients treated with tanruprubart 30 mg/kg had a 2.41-fold higher likelihood of being in a better state of health relative to placebo at Week 8 on the GBS-disability scale (GBS-DS) score (GBS-DS odds ratio [OR] 2.4, 95% CI 1.3–4.5; p=0.0058). Consistent with the findings from the GBS-01 study, benefit observed with a higher dose of tanruprubart (75 mg/kg group) did not reach significance versus placebo at Week 8 (OR 1.2, 95% CI 0.65–2.2; p=0.5548)[8]
- Tanruprubart was well tolerated, and most adverse events were mild to moderate in severity, attributed to GBS, and not considered related to study drug with the exception of rash. Rash was the most common infusion-related reaction; cases were mostly mild to moderate and resolved without sequalae[8]

OBJECTIVE

- This analysis aims to characterize the effect of classical complement inhibition with tanruprubart 30 mg/kg on the patient-reported burden of GBS across multiple measures in the GBS-02 study

METHODS

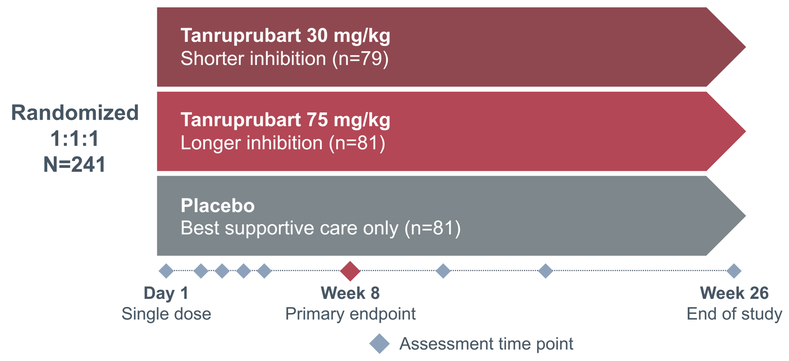
Patient-reported outcomes

- Patient-reported outcomes were assessed using the EuroQol 5-Dimension 5-Level (EQ-5D-5L) tool, the Rasch-built Overall Disability Scale (rODS), and Patient Global Impression of Change (PGIC)
- Proportional odds regression was used to evaluate the five EQ-5D-5L domains over time
- A mixed model for repeated measures was used to compare rODS scores with tanruprubart versus placebo

GBS-02 study design

Key inclusion/exclusion criteria:
- Aged ≥16 years
- With a GBS-DS 3, 4 or 5
- ≤10 days from onset of weakness
- Did not have access to intravenous immunoglobulin or plasma exchange
- Stratified by baseline prognostic factors: muscle strength and time from onset of weakness

Conducted at sites in Bangladesh and the Philippines



RESULTS

Patient population

- A total of 241 patients were randomized to tanruprubart 30 mg/kg (n=79), 75 mg/kg (n=81), or placebo (n=81), and patient baseline characteristics were balanced across the treatment arms

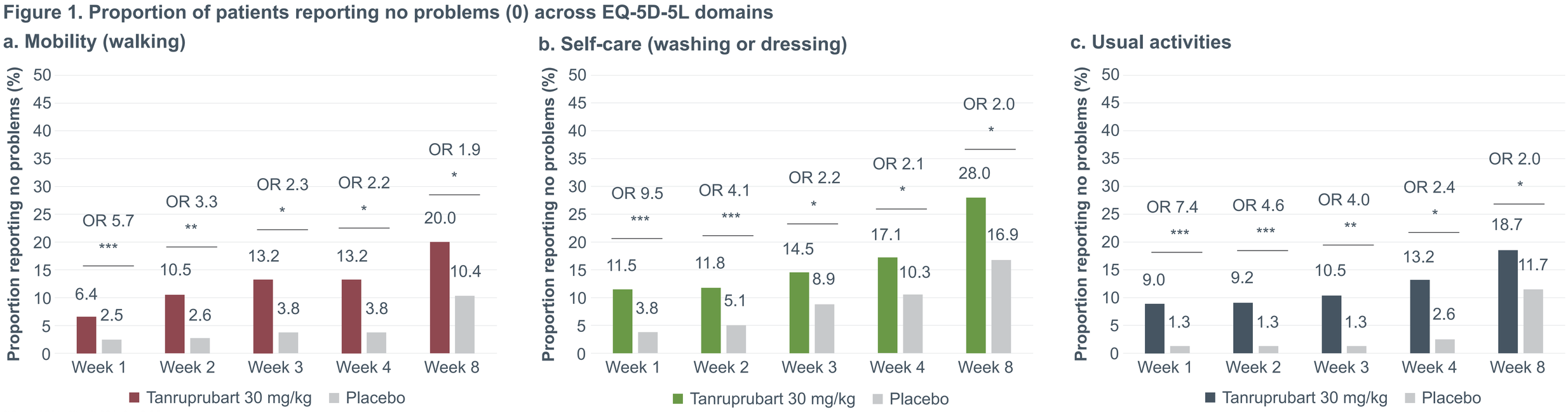
EQ-5D-5L and rODS

- Rapid and significant improvement in patient health-related quality of life as measured by EQ-5D-5L mobility, self-care, and usual activity domains were observed at the earliest time point (Week 1) with tanruprubart (30 mg/kg), and benefit continued through Week 8 (**Figure 1**). Significant changes were not seen in the pain/discomfort or anxiety/depression domains
- These rapid and significant changes in the EQ-5D-5L were matched by significant and rapid improvements in instrumental and basic activities of daily living (ADL) assessed using rODS (**Figure 2**)
- Patients experienced rapid improvement in physical activity/mobility with the largest benefits in walking-based activities (walk up a flight of stairs, walk outdoors up to 1 kilometer)

PGIC

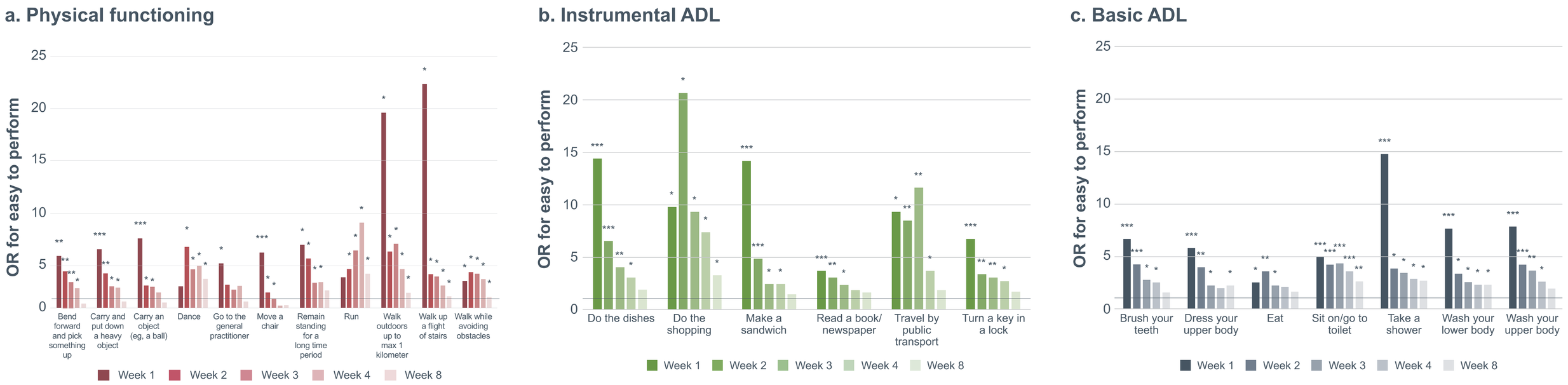
- Tanruprubart-treated patients reported a rapid decrease in perceived disability and were more likely to report improvement in their condition on the PGIC as early as Week 1 (OR 2.5; p=0.0028) and continuing through Week 8 (OR 1.4; p=0.2917) when compared to placebo

Figure 1. Proportion of patients reporting no problems (0) across EQ-5D-5L domains



***p<0.0001; **p<0.001; *p<0.05.

Figure 2. Odds ratios for tanruprubart 30 mg/kg versus placebo in performing tasks assessed by rODS



***p<0.0001; **p<0.001; *p<0.05.

CONCLUSIONS

- **Rapid complement inhibition with tanruprubart 30 mg/kg led to a more rapid regain of mobility and independence across a range of basic and instrumental ADL compared to placebo**
- **These data further support the finding that classical complement inhibition with a single dose of tanruprubart rapidly reduces complement-mediated neuroinflammation and nerve damage leading to early stabilization of patients during the acute progressive phase of GBS**
- **EQ-5D-5L data correlate with rODS data, demonstrating more tanruprubart-treated patients regained the ability to move independently, do personal tasks, and return to regular routines**

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