



### REVIEWER'S REPORT

Manuscript No.: IJAR-50375

Date: 24-02-2025

**Title: Efficacy and safety of mirabegron plus vitamin D3 vs mirabegron alone in the treatment of adult patients of overactive bladder: a randomized controlled trial**

**Recommendation:**

- Accept as it is.....**YES**.....
- Accept after minor revision.....
- Accept after major revision .....
- Do not accept (*Reasons below*) .....

Rating	Excel.	Good	Fair	Poor
Originality	√			
Techn. Quality		√		
Clarity		√		
Significance			√	

**Reviewer's Name:** Dr Aamina

**Reviewer's Decision about Paper:**      **Recommended for Publication.**

**Comments** (*Use additional pages, if required*)

### Reviewer's Comment / Report

The study "Efficacy and safety of mirabegron plus vitamin D3 vs mirabegron alone in the treatment of adult patients of overactive bladder: a randomized controlled trial" presents a well-structured investigation into the role of vitamin D as an adjuvant therapy in managing overactive bladder (OAB). The study effectively highlights the complex etiology of OAB and the current limitations in pharmacological treatment options. The introduction provides a clear background on the role of  $\beta_3$  receptor agonists such as mirabegron and their effectiveness in relaxing the detrusor muscle. Additionally, the study emphasizes the emerging evidence linking vitamin D deficiency to hypercontractility of the bladder, providing a strong rationale for the research.

The methodology section is detailed and follows ethical considerations, including approval from the Institutional Ethics Committee and adherence to international research guidelines. The inclusion and exclusion criteria are clearly defined, ensuring the selection of a relevant patient population. The classification of patients into three groups based on vitamin D levels allows for a comparative analysis of the potential benefits of vitamin D supplementation in OAB management.

The study employs validated assessment tools, including the Urgency Severity Score (USS), Overactive Bladder Symptoms Severity Score (OABSS), and a Three-Day Voiding Diary. These measures provide a comprehensive evaluation of symptom severity and treatment response over a 12-week period. The results demonstrate a statistically significant reduction in symptom severity across all groups, with a

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notable difference between Groups B and C at the end of the study. The findings suggest that vitamin D supplementation may enhance symptom reduction in patients with OAB.

The study also incorporates a safety assessment by monitoring side effects associated with mirabegron. This ensures a balanced evaluation of both efficacy and tolerability. The structured follow-up visits and systematic data collection contribute to the reliability of the findings.

Overall, the study provides valuable insights into the potential role of vitamin D supplementation in OAB management. The research contributes to the growing body of evidence on the interplay between vitamin D and bladder function, reinforcing the need for further exploration in this area.