

REVIEWER'S REPORT

Manuscript No.: IJAR-54629

Date: 3/11/2025

Title: Impact of Vitamin D rates on risk of post-thyroidectomy hypocalcemia

Recommendation:

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

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

Reviewer Name: Dr. S. K. Nath

Date: 4/11/2025

Reviewer's Comment for Publication:

This manuscript presents a promising exploration into the relationship between preoperative Vitamin D deficiency and postoperative hypocalcemia following thyroidectomy. While the preliminary findings are intriguing, the limited sample size and incomplete statistical analysis currently restrict the strength of the conclusions.

Reviewer's Comment / Report

Strengths

- Relevance and Clinical Significance:** The study addresses a pertinent issue in thyroid surgery postoperative hypocalcemia—and explores the potential role of preoperative Vitamin D status as a predictive factor. This could have significant implications for preoperative assessment and management, potentially improving patient outcomes.
- Clear Methodology:** The study design is described as a cross-sectional epidemiological analysis with well-defined inclusion and exclusion criteria. The measurements of biochemical parameters (Vitamin D and calcium levels) are clearly explained.
- Use of Established Classification:** The categorization of Vitamin D status follows the recognized GRIO classification, adding validity to the assessment.
- Relevant Literature and Guidelines Cited:** The manuscript references current guidelines (e.g., EU-TIRADS) and prior evidence regarding thyroidectomy complications, demonstrating good grounding in existing research.

Weaknesses

- Limited Sample Size:** The study includes only 42 patients, which limits the statistical power and generalizability of the findings. Larger studies are needed to confirm the preliminary results.
- Insufficient Detail on Statistical Analysis:** While some statistical tests (e.g., ANOVA, Fisher's exact test) are mentioned, the results lack detailed statistical data (e.g., confidence intervals, exact p-values), which are necessary for thorough interpretation.
- Lack of Multivariate Analysis Outcomes:** The text states that age and gender were assessed, but the results indicate no significant impact. However, the role of Vitamin D deficiency as an independent predictor needs to be clearly statistically demonstrated, preferably via multivariate logistic regression results.
- Potential Confounders Not Fully Addressed:** The study excludes patients with abnormal PTH or renal dysfunction, but other factors influencing calcium or Vitamin D levels (e.g., nutritional status, sun exposure, comorbidities) are not discussed.

International Journal of Advanced Research

Publisher's Name: Jana Publication and Research LLP

www.journalijar.com

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5. **Typographical and Grammatical Errors:** There are minor language issues, such as inconsistent use of abbreviations and punctuation, that could be improved for clarity and professionalism.
6. **Clarity and Organization:** The structure of some sections (e.g., Methods, Results) could be more clearly delineated to enhance readability.
7. **Incomplete Reference Section:** Some references (e.g., [4,14]) are cited but not fully detailed in the bibliography provided. Ensure all references are complete and follow a consistent format.

Recommendations for the Author

- Expand on the statistical analysis, providing detailed outcomes (e.g., odds ratios, confidence intervals, p-values).
- Include a multivariate analysis with clear results to delineate whether Vitamin D deficiency is an independent risk factor.
- Clarify the inclusion/exclusion criteria, especially regarding other potential confounders.
- Improve language clarity, grammar, and punctuation throughout the manuscript.
- Properly complete and format the reference list, ensuring all cited sources are listed.