



## Commentary

## Comment on Correlation of serum calcium, phosphorus, and Vitamin D in osteoporosis: An observational study

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I read with great enthusiasm and interest the article by Suman Medhi et al, on “Correlation of serum calcium, phosphorus, and Vitamin D in osteoporosis: An observational study”, Published in Dec 2024.<sup>1</sup>

Study involved 100 patients with osteoporosis and their serum levels were studied.

Its interesting to note that Vitamin D level was low in our country, which is a tropical area with adequate sunlight. Of course Vitamin D and Calcium homeostasis occur due to the regulation of Parathyroid hormone. Vitamin D level didn't have any impact on phosphorous level.

25 hydroxy Vitamin D3 (circulating form) level estimation will be the accurate tool to identify the deficiency of Vitamin D3. Hope the authors can clarify. Authors also showed moderate positive correlation ( $r = 0.4403$ ) between calcium and vitamin D levels, with a statistically significant result ( $p < 0.0001$ ). Patient with osteoporosis do have low calcium and low Vitamin d levels, which may be due to various other causes. Patients in this study seem to be from an area where sunlight exposure will be very less due to the geographic locations. This may be a confounding factor while analyzing the low Vitamin D and calcium levels. Its important to note that higher Vitamin d levels contribute to higher calcium levels in these patients. Vitamin D supplementation

may decrease bone turnover and increase bone mineral density.<sup>2</sup> Studies have demonstrated that vitamin D supplementation can improve muscle strength which in turn contributes to a decrease in incidence of falls, one of the largest contributors to fracture incidence.<sup>3</sup>

This undoubtedly point towards adequate Vitamin D and Calcium intake would help improve the bone health and milieu interior thereby may reduce osteoporotic fractures.

### Conflict of Interest

None.

### References

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