Are We Meeting The Vitamin D Requirements Of Our Patients Through Parenteral Nutrition?

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Background and importance

Vitamin D plays a crucial role in calcium and phosphorus homeostasis, bone metabolism, immune regulation and overall metabolic health. Hospitalized patients are particularly susceptible to deficiency due to limited sunlight exposure, hepatic and renal dysfunction and inadequate nutritional intake.

Aim and Objectives

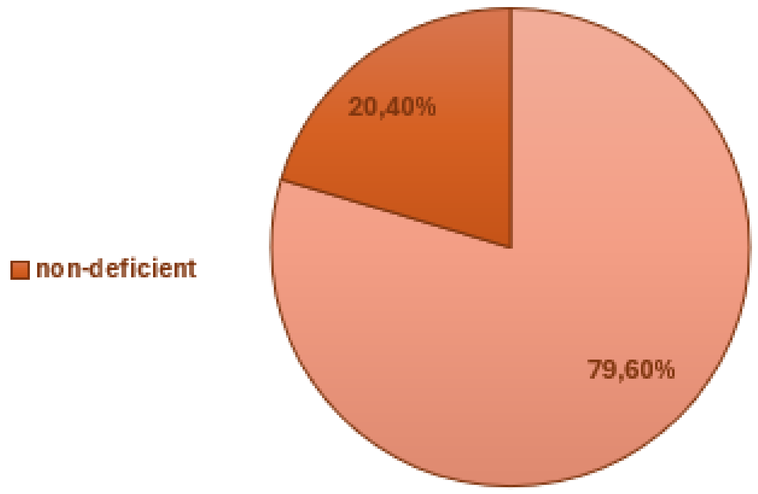
To assess baseline and follow-up vitamin D levels in patients receiving parenteral nutrition (PN) containing 200 IU of ergocalciferol, in order to identify deficiencies and establish appropriate supplementation protocols.

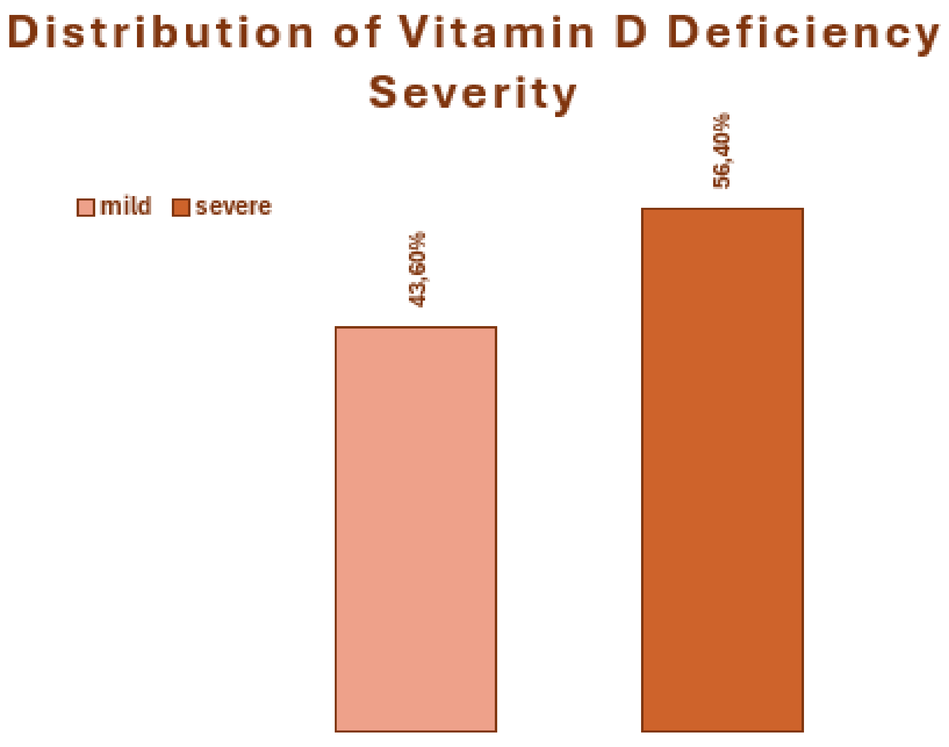
Materials and Methods

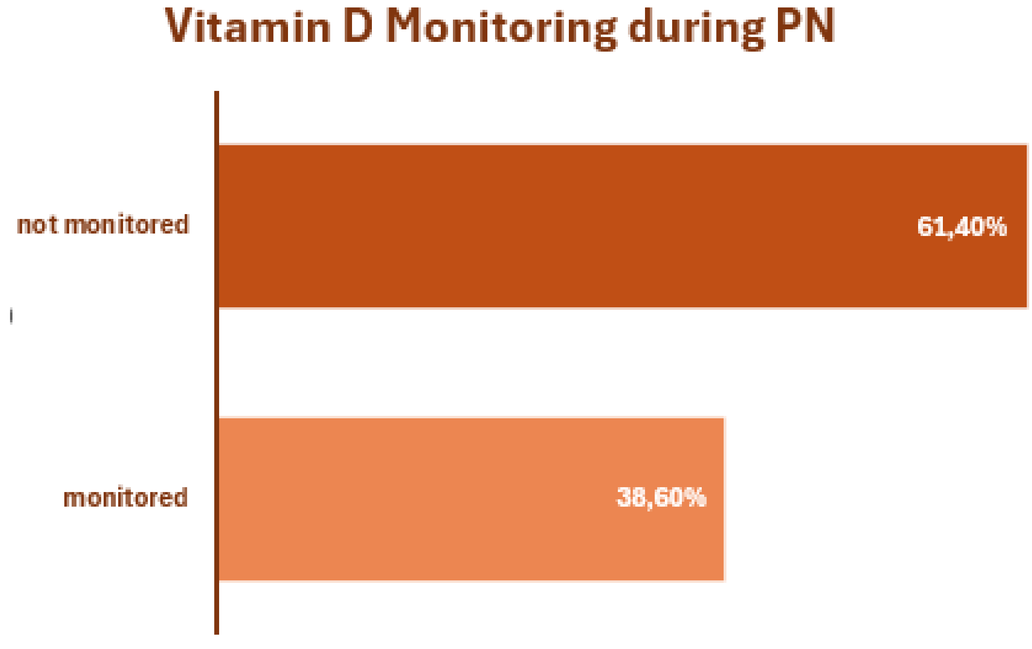
A retrospective, observational, single-centre study was conducted in a tertiary care hospital during 2024. All adult inpatients treated with PN who had at least one vitamin D measurement were included.
Vitamin D deficiency was classified according to the 2022 ESPEN micronutrient guidelines, as mild (<20ng/mL) or severe (<12ng/mL) based on plasma 25-hydroxyvitamin D concentration.

Results

57 patients were included
- 27 females (47,4%)
- Median age: 70 years
- Median BMI: 23.1 kg/m²
- Median PN duration: 19.4 days







Conclusion and Relevance

Vitamin D deficiency was highly prevalent among PN patients reflectin an inadequate supply. The implementation of standardized supplememtation and monitoring protocol is therefore crucial to optimiza patient management and prevent deficiency.

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