



AB138. 211. A study of vitamin D levels in a frail elderly hip fracture population and a comparative non-frail elderly population

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Background: Older adults often suffer from vitamin D deficiency and the frailty syndrome characterized by a state of increased vulnerability to poor resolution of homeostasis after a stressor event. Previous studies have suggested a relationship between vitamin D status and the frailty syndrome, but results have been inconsistent. This study aimed to compare a screened frail hip fracture elderly Irish population with a comparative non-frail elderly population, **Methods:** A database of screened inpatient frail elderly patients was reviewed retrospectively to identify vitamin D levels. This was compared with an age matched cohort of

non-frail patients who were undergoing elective hip and knee operations. A level of <30 nmol/L was deemed deficient. A level greater than 50 nmol/L was deemed adequate.

Results: One hundred and three frail elderly patients had vitamin D levels checked. Forty-one (40%) were male. Sixty-two (60%) were female. The age range was from 70 to 99 years of age. Seventy-five non-frail patients were compared, with an age range of 70 to 89 years of age. Overall there was no difference in mean vitamin D levels between the two groups. However, the frail population had more patients with deficient vitamin D levels (level <30 nmol/L) *vs.* the non-frail population, 43% *vs.* 29%.

Conclusions: This study highlights that vitamin D deficiency is common in an elderly population. Frail elderly patients were more likely to be vitamin D deficient and this reached statistical significance.

Keywords: Vitamin D; levels; frailty; hip-fracture

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