Parathyroid Hormone and its role in Bone Transfer, in Osteoporosis and Scleroderma

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Abstract

PTH or Parathyroid Hormone is a hormone in charge of Decalcification and transfer of Calcium from the bones to the blood stream to elevate serum Calcium Levels.

This referenced research [1] explains the negative correlation between Vitamin D levels and serum PTH: "Serum PTH correlated negatively with serum 25OHD (r = −0.25; P < 0.001). This significant negative correlation was observed in all regions. When serum 25OHD was less than 25, 25–50, or more than 50 nmol/L, respectively, mean serum PTH levels were 4.8, 4.1, and 3.5 pmol/L, respectively ". [1, 9-14]

Multiple Studies have shown a correlation between Vitamin D deficiency and Scleroderma [2-4] and Osteoporosis [1, 5-8].

In Osteoporosis Bone density deterioration possibly stems from Vitamin D deficiency and therefore from elevated PTH secretion, causing Decalcification of the bones to the bloodstream.

Scleroderma is more common in people with darker skin complexions, possibly as a result of lifestyle alterations or immigrations and in this case the calcium dismantled by the PTH from the bones to the blood stream reaches the skin and goes through re-calcification on the skin that stems from the higher melanin and vitamin D levels on the skin in darker skinned individuals.

It's therefore highly recommended to further examine Vitamin D levels and its effect on serum PTH and bone decalcification and recalcification, and its possible significance as treatment to the above mentioned diseases.

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