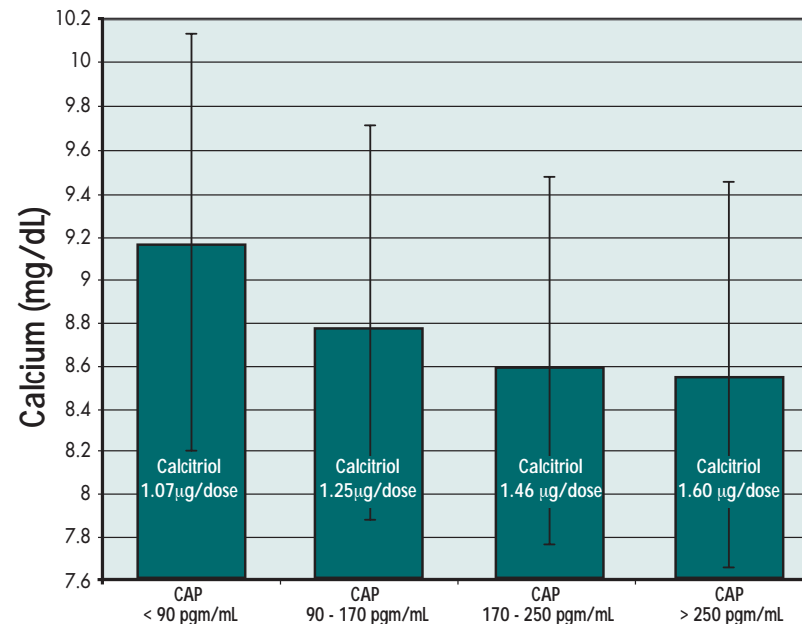


THE RELATIONSHIP BETWEEN CAP (1-84 PTH) AND SERUM CALCIUM

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We compared the serum calcium concentrations with the CAP(1-84 PTH) assay values for 138 of our routine hemodialysis patients. Using bone histology, Dr. Tokumoto has demonstrated that a CAP assay value of <90 pgm/ml indicates adynamic bone disease for an ESRD patient, that a value of 90-170 pgm/ml indicates normal bone turnover, and that a value >170 pgm/ml indicates high bone turnover. Based on these criteria, we investigated the serum calcium levels associated with adynamic bone disease (<90 pgm/ml), normal bone turnover (90 -170 pgm/ml), high bone turnover disease (170 -250 pgm/ml) and very high bone turnover disease (>250 pgm/ml). The only vitamin D used among these patients was calcitriol. From the lowest to the highest, the average calcitriol dose increased from 1.07 to 1.60 ug/dose. Surprisingly, we found that the highest serum calcium group was associated with the lowest dose of calcitriol, but that group was the adynamic bone disease group. The serum calcium decreased as the turnover increased. Elevated serum calcium has been demonstrated to be associated with an increased mortality risk. These data confirm the understanding that when bones are in an adynamic bone state, they are not able to properly incorporate and buffer serum calcium.

Relationship of CAP (1-84 PTH) and Calcium



Data from ESRD patients at North Shore University Hospital, New York, November 2003

Ashfaq A, Mossey R, Bellucci A, et al. The Relationship between CAP (1-84 PTH) and Serum Calcium. *Am J Kidney Dis* 2004(April); 43(4):11, pp. A17.