

BONE HISTOLOGY FROM 7 ESRD PATIENTS CONFIRMED THAT NO PATIENT WITH HYPERPARATHYROIDISM HAD A CAP/CIP RATIO OF <1.5

Richard Amerling. Beth Israel Med. Ctr., New York, NY, USA.

Seven ESRD patients presented with clinical symptoms of hyperparathyroidism. Intact PTH values ranged from 566 pgm/ml up to 2013 pgm/ml. Specific 1-84 PTH values ranged from 356 to 1228 pgm/ml. All patients had refractory hypercalcemia and/or hyperphosphatemia, and most had clinical symptoms of either bone pain or soft tissue calcification. All were considered candidates for parathyroidectomy. In order to confirm suspected hyperparathyroidism these patients underwent transiliac bone biopsy with a Jamshidi needle, after double tetracycline labeling. Bone sections were dehydrated in ethanol and stained with standard mineralized histological technique. Subsequent histological examination revealed hyperparathyroidism. All of the 1-84 PTH/7-84 PTH (CAP/CIP) ratio values were above 1.5, ranging from 1.5 to 3.5 (mean: 2.1)

There has been a large increase in the prevalence of adynamic bone disease in recent years; the current challenge is to diagnose these patients accurately in a non-invasive manner. Tokumoto has reported that a 1-84 PTH/7-84 PTH ratio of less than 1.4 is indicative of adynamic bone disease in a dialysis patient. The lowest ratio we observed in this group was 1.5, in a patient with mixed osteodystrophy, predominant osteitis fibrosa.

PT #	Age	Total PTH	1-84	7-84	1-84/7-84	Ca	Phos	Alk Phos	Bone Bx
1	35	1269.5	989.3	280.2	3.5	9.5	5.3	323	Hyperparathyroid Dz
2	56	856.5	596	260.5	2.3	10.3	6.9	197	Hyperparathyroid Dz
3	59	2013	1228	785	1.8	10.3	8.1	321	Hyperparathyroid Dz
4	51	714.3	453.7	260.6	1.7	9.2	5.5	308	Mixed hyperpara predom
5	54	892	581.1	311	1.9	9.5	7.4	205	Hyperparathyroid Dz
6	25	565.5	356.2	209.4	1.7	7.8	12.7	103	Hyperparathyroid Dz
7	54	901	545	356	1.5	9.8	7.7	488	Mixed, hyperparab predom
Mean	47.7	1030.3	678.5	351.8	2.1	9.5	7.7	277.9	

Amerling R. Bone Histology from 7 ESRD Patients confirmed that no patient with Hyperparathyroidism had a CAP/CIP Ratio of <1.5.
Am J Kidney Dis 2004(April); 43(4):5, pp. A16.