PRELIMINARY RESULTS OF A PROSPECTIVE RANDOMIZED STUDY ON THE EFFECT OF PARATHYROIDECTOMY IN ASYMPTOMATIC PRIMARY HYPERPARATHYROIDISM

E. Ambrogini[1], L. Cianferotti[1], E. Vignali[1], F. Cetani[1], A. Picone[1], G. Viccica[1], P. Miccoli[2], A. Pinchera[1], C. Marcocci[1]

[1] University of Pisa, Endocrinology and Metabolism, Pisa, Italy
[2] University of Pisa, Surgery, Pisa, Italy

This 2-year, prospective, randomized study compares the effects of parathyroidectomy (PTX) vs follow-up in patients with asymptomatic primary hyperparathyroidism (PHPT) who don't meet the NIH 1991 criteria for surgery. The primary endpoint was the change in lumbar spine BMD. Secondary endpoints were: changes of BMD at hip and forearm, bone turnover markers, quality of life and echocardiographic data. Complications of surgery and progression of PHPT in the untreated group were evaluated. 45 women and 4 men have been enrolled: 24 underwent PTX and 25 were not treated. We report the results in 40 patients who completed the one-year follow-up. In the PTX group lumbar spine and hip BMD increased after one year by 4.3% and 2.2%, whereas in the untreated group they decreased by 1.3% and 2.3%, respectively. The % changes were significantly different between the two groups ($p<0.005$ at both sites). No significant changes in psychological and echocardiografic parameters were observed. Seven of the 21 untreated patients had appearance of at least one of the NIH criteria for PTX: worsening of hypercalcemia (n=1), hypercalciuria (n=4), nephrolitiasis (n=1), forearm Z-score below –2 (n=2) and clinical vertebral fracture (n=1). No complications of surgery were observed. In conclusion, the PTX significantly improved BMD at lumbar spine and femur in treated patients compared to untreated ones, and conservative follow-up was associated with a progression of the disease in one third of patients.