Efficacy of Zoledronic Acid Treatment in Paget Disease of Bone

Emine Kartal Baykan(1), L. Füsun Saygılı(1)Mehmet Erdoğan(1), A. Gökhan Özgen(1), Şevki Çetinkalp(1), Candeger Yilmaz(1)

Ege University Medical Faculty, Department of Endocrinology and Metabolism

Purpose: Paget disease is a disease of bone of unknown etiology with increased bone turnover that results in defective bone microarchitecture and bone deformity. Bisphosphonates are used in symptomatic Paget disease of bone. Clinical trials have shown that zoledronic acid was more effective than other bisphosphonates in treatment of Paget disease.

Methods: In this study, we retrospectively reviewed the remission and relapse statuses of 12 patients with Paget disease of bone, who were seen as outpatients between October 2011 and October 2013.We evaluated alkaline phosphates, osteocalcin, deoxypyridinoline levels measured before and at 6 th, 12 th,18th months of treatment.

Results: Pretreatment and post-treatment valus for alkaline phosphates, deoxypyridinoline, osteocalcin were as follows; 473 ± 256 U/L, 14.99 ± 7.63 mmol/L, 21.09 ± 3.18 ng/ml and 82 ± 13 U/L, 5.14 ± 1.11 mmol/L, 8.57 ± 4.31 ng/ml. Remission was achieved in all patients after treatment. The levels indicated remission continued at 12th and 18th months of treatment. There was statistically significant difference between pretreatment and post-treatment values. No statistically significant difference between the levels measured at 6th, 12th and 18th months of treatment were detected.

Conclusion: We recommend zoledronic acid in the first line treatment of Paget disease of bone in achieving and maintaining remission.

Keywords: Zoledronic Acid, Bisphosphonates, Bone Turnover, Paget Disease

Table 1. Pretreatment and posttreatment results

	BASAL (n:12)	**6th month** (n:12)	**12th month** (n:12)	**18th month** (n:12)
ALP (40 – 129 U/L)	473 ± 256	82 ± 13*	67 ± 15 * ^	74 ± 12.5 * ^ +
DPD (2.3 – 5.4mmol/L)	14,99 ± 7,63	5,14 ± 1,11*	4,90 ± 1,18 * ^	5.09 ± 1,31 * ^+
OC (2 – 15 ng/ml)	21,09 ± 3,18	8,57 ± 4,31*	4,34 ± 1,82 * ^	5,45 ± 1,35 * ^+

** p < 0.001; ALP, DPD, OC values at 6th, 12th, 18th months were significantly lower than basal values.*
^ + p > 0.05; Difference between values of 6th, 12th, and 18th months were not statistically significant