

OPG, RANKL, RANKL/OPG RATIO, OPN IN POSTMENOPAUSAL WOMEN POPULATION

M. D'Amore¹, G. Minenna¹, S. D'Amore², S. Caprio³, A. Scagliusi⁴, P. Scagliusi¹

University of Bari, Bari, Italy

¹ DIMIMP, Section of Rheumatology

² DIMIMP, Section of Internal Medicine

³ Department of Human Anatomy

⁴ Department of Clinica Medica, Immunological Clinic and Infectious Diseases, Section of Dermatology

The aim of this study is to evaluate the serum concentration of OPG, RANKL, RANKL/OPG ratio, osteopontin (OPN), bone-type alkaline phosphatase (BAP), serum-N-Telopeptide of type I collagen (serum-NTX), bone mineral density (BMD) in postmenopausal women population. A cohort of 163 women in postmenopausal, not in therapy for osteoporosis, has been followed up at the osteoporosis centre of Policlinico in Bari. The population with main age of 55,5 years (range 43-64), in menopausal disorder since 2 years, has been divided into three separate groups, depending from their T-score: osteoporosis n. 28/163; osteopenic n. 100/163; normal n. 35/163. Comparison of the variables in the three groups has been executed through kruskal-Wallis test. Correlations have been calculated using Spearman's correlation coefficient. All values have been presented using mediana with range. The comparison among the three groups is significant for RANKL (Kw=14.86, p=0,000), RANKL/OPG ratio (Kw=13.24, p=0.0013), NTX (Kw=11.92, p=0.0026) and OPN (Kw=7.53, p=0.022), but non for OPG and BAP. The correlation among considered variables has shown significant statistical variation in the group of osteopenic women: a negative correlation between OPG and RANKL ($r_s=-0,242$, p=0,0153), positive one between RANKL and OPN ($r_s=0,304$, p=0,0021), RANKL and serum-NTX ($r_s=0,213$, p=0,033), OPN and serum-NTX ($r_s=0,465$, p<0,0001), OPN and RANKL/OPG ratio ($r_s=0,261$, p=0,0086), BAP and serum-NTX ($r_s=0,510$, p<0,0001), serum-NTX and RANKL/OPG ratio ($r_s=0,202$, p=0,044). Our study shows an important variation of the bone metabolism markers including RANKL, OPG and OPN in postmenopausal women with a serious engagement of the bone turnover above all in the pre-osteoporotic phase.