OBJECTIVE:

Measuring vitamin D and its regulating hormones in the serum might be an accurate method for assessment of rheumatoid arthritis (RA) activity. We tested the hypothesis that the serum levels of vitamin D and parathyroid hormone (PTH) are associated with the grade of disease activity in an unselected cohort of patients with RA.

METHODS:

A total of 158 patients who met the American College of Rheumatology criteria for RA were examined and categorized as the patients with the active RA (n = 87) and silent RA (n = 71). Blood samples were obtained after at least eight-hour overnight fasting and the levels of 25-OH-vitamin D and PTH were measured.

RESULTS:

The levels of the vitamin D in patients with active RA were significantly lower than in those with silent RA (49.38±38.21 versus 64.64±43.61 nmol/l; p = 0.022). The PTH serum level lower than the normal range (< 0.8 nmol/l) was statistically observed similar in the active RA group compared with another ones (10.3 % versus 4.2 %, p = 0.149). Serum levels of vitamin D and PTH were not influenced by patients' gender and age as well as the duration of disease.

CONCLUSION:

Serum level of vitamin D was inversely related to RA activity and this relationship might be independent of PTH secretion or activity.

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