

## Vitamin D Levels of Patients with Rheumatoid Arthritis in Kosova

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**Abstract :** Rheumatoid arthritis is a chronic disease that causes inflammation of the joints which can be so severe that can cause not only deformities but also impairment of function that limits movement. This also contributes to the pain that accompanies this disease. This remains a problematic and challenging disease of modern medicine because treatment is still symptomatic. The main purpose of drug treatment is to reduce the activity of the disease, achieve remission, avoid disability and death. The etiology of the disease is idiopathic, but can also be linked to genetic, nongenetic factors such as hormonal, environmental or infectious. Current scientific evidence shows that vitamin D plays an important role in immune regulation mechanisms. Lack of this vitamin has been linked to loss of immune tolerance and the appearance of autoimmune processes, including rheumatoid arthritis. The purpose of the work was to define Vitamin D in patients hospitalized with rheumatoid arthritis in University Clinical Center of Kosova, as a basis of their connection with lifestyle and physical inactivity. The sample for the work was selected from patients with criteria met for rheumatoid arthritis who were hospitalized at the tertiary level of health care in Kosova. During the work have been investigated 100 consecutive patients fulfilling diagnostic criteria for rheumatoid arthritis, whereas in addition to the general characteristics are also determined the values of vitamin D at the beginning of hospitalization. The average age of the sample analyzed was  $50.9 \pm 5.7$  years old, with an average duration of rheumatoid arthritis disease  $7.8 \pm 3.4$  years. At the beginning of hospitalization, before treatment was initiated, the average value of vitamin D was  $15.86 \pm 3.43$ , which according to current reference values is classified into the category of insufficient values. Correlating the duration of the disease, from the time of diagnosis to the day of hospitalization, on one side and the level of vitamin D on the other side, the negative correlation of a lower degree derived ( $r = -0.1$ ). Physical activity affects the concentration of vitamin D in the blood through increased metabolism of fat and the release of vitamin D and its metabolites from adipose tissue. To now it is evident that physical activity is also accompanied by higher levels of vitamin D. In patients with rheumatoid arthritis, vitamin D levels were low compared to normal. Future works should be oriented toward investigating in detail the bone structure, quality of life and pain in patients with rheumatoid arthritis. More detailed scientific projects, with larger numbers of participants, should be designed for the future to clarify more possible mechanisms as factors related to this phenomenon, such as inactivity, lifestyle and the duration of the disease, as well as the importance of keeping vitamin D values at normal limits.

**Keywords :** hospitalization, lifestyle, rheumatoid arthritis, vitamin D.

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