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# Effect of high dose intravenous ascorbic acid on the level of inflammation in patients with rheumatoid arthritis

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## ABSTRACT

Rheumatoid arthritis (RA) is a major inflammatory joint disease that causes cartilage destruction, bone erosions, and joint destruction. Oxidative stress is elevated in RA patients implying reactive oxygen species (ROS) are possible mediators of tissue damage. ROS trigger a cascade of events through nuclear factors ' activation (NF-kappa B), which up-regulates gene expression of pro-inflammatory cytokines that mediate the immune responses causing inflammation. As ascorbic acid can reduce oxidative stress, decrease production of pro-inflammatory cytokines, and suppress the activation of NF-kappa B, we suggest that millimolar concentration of ascorbic acid may be useful in RA treatment. In our study we analyzed the effect of intravenous vitamin C (IVC) treatment on eleven subjects with RA. Our data suggest that IVC therapy with dosages of 7.5 g - 50 g can reduce inflammation. The level of inflammation as measured by C-reactive protein levels was decreased on average by 44%. Based on our pilot study, we hypothesize that IVC therapy can be a useful strategy in treating RA.

## KEYWORDS

Rheumatoid Arthritis; Inflammation; C-Reactive Protein; Intravenous Vitamin C

## Cite this paper

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