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Methotrexate plus Medical Ozone combined therapy in Rheumatoid Arthritis. From experimental models to clinical trials [abstract]

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ABSTRACT

Introduction. The aim of this work has been to investigate the medical ozone effects on 2 experimental models: PG/PS induced RA and synovitis followed for a clinical trial of efficacy.

Methods. mRNA levels of TNF-alpha and IL-1 beta, injury and protective biomarker of oxidative stress, morphology studies, A1 adenosine receptor role, Anti-Cyclic Citrullinated (Anti-CCP) levels and clinical variables were determined.

Results. Medical ozone ameliorated the expression of proinflammatory cytoquines, reduced oxidative damage while participation of A1 adenosine receptor in the antiinflammatory effects was demonstrated.

In RA patients (n=60) MTX + ozone reduced the activity of the disease while MTX merely showed a tendency to decrease it. MTX + ozone reduced Anti-CCP levels as well as increased antioxidant system, and decreased oxidative damage whereas MTX did not change.

Conclusion. Medical ozone was effective in the reduction of inflammatory response in 2 experimental studies. MTX + ozone increased the MTX clinical efficacy in RA patients. These results suggest that ozone can increase the efficacy of MTX probably because both share common therapeutic targets.

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