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Decrease in antioxidant status of plasma and erythrocytes from patients with ankylosing spondylitis.

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OBJECTIVES: The aim of the study was to evaluate the antioxidant status in plasma and erythrocytes from patients with ankylosing spondylitis (AS). **METHODS:** 16 patients with AS and 16 healthy volunteers were involved in this study. Activities of antioxidant enzymes: superoxide dismutase (SOD) and its isoenzymes - (SOD-Mn) and (SOD-ZnCu), catalase (CAT), glutathione peroxidase (GPx), glutathione reductase (GR) and glutathione transferase (GST), as well as the total antioxidant status (TAS) and concentration of malondialdehyde (MDA) in plasma and/or erythrocytes, respectively were determined. **RESULTS:** In patients with AS, a statistically significant decrease in plasma activity of SOD, SOD-CuZn and TAS, significant drop in activity of SOD, GPx, GST and GR in erythrocytes, as well as increased concentration of MDA in comparison with control group of healthy volunteers was observed. **CONCLUSION:** Decrease in antioxidant status leading to generation of oxidative stress may play an important role in the pathogenesis of ankylosing spondylitis. Copyright © 2009. Published by Elsevier Inc.

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