



Oxidant and antioxidant levels in children with acute otitis media and tonsillitis: a comparative study.

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OBJECTIVE: Recurrent episodes of acute otitis media (AOM) and acute tonsillitis (AT) are a common problem in infectious disorders during childhood and are major cause of morbidity in children. The organism maintains defense systems including nonenzymatic antioxidants such as Vitamins A, E and C and reduced glutathione (GSH) against reactive oxygen species (ROS). In the present study, lipid peroxidation status and nonenzymatic antioxidant capacity were investigated in children with AOM and AT. Our aim was to compare the lipid peroxidation and responses of the body's antioxidant status in the closely associated infections such as AOM and acute tonsillitis. **METHODS:** The study included 23 (14 males, 9 females) children with AOM, 27 (14 males, 13 females) with AT and 29 (16 males, 13 females) healthy control subjects. The ages of the study and control subjects were between 2 and 7 years. Serum beta-carotene, retinol, Vitamin E, Vitamin C, and whole blood malondialdehyde (MDA) (as an indicator of lipid peroxidation) and GSH levels were studied in all subjects. **RESULTS:** There was a statistically significant difference between the groups for all parameters ($P < 0.05$). All of the antioxidant vitamins such as beta-carotene, retinol, Vitamin E, and Vitamin C levels were observed to be significantly decreased in the both patient groups. Nevertheless, GSH levels were also decreased in the patient groups. MDA levels were found to be higher in children with AOM and AT than in the healthy control subjects. When compared the AOM and AT groups, there was statistically significant difference between the groups for whole blood MDA ($P < 0.05$). **CONCLUSION:** Even though they seem to react in a similar way against ROS, in the cases of AOM and AT, it is possible to see the different approaches in these tissues for the oxidative stress.

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