Abstract

Acne vulgaris is the one of the most common skin diseases. Although isotretinoin (13-cis-retinoic acid) is an effective and well-tolerated medication, it has a wide range of side effects. Because the effects of isotretinoin on oxidant and antioxidant systems have not yet been clarified, we investigated plasma and erythrocyte antioxidant vitamins, lipid peroxidation (LP), reduced glutathione (GSH) and glutathione peroxidase (GSH-Px) values in patients with acne vulgaris before and after isotretinoin treatment. The study was performed on the blood plasma and erythrocytes of 31 acne vulgaris patients. Blood samples were taken from the patients before treatment and after isotretinoin (oral and 0·5-0·7 mg·kg(-1)) treatment for 2 months. Plasma antioxidant vitamins, erythrocyte malondialdehyde, GSH and GSH-Px levels were measured. Plasma vitamin E (p < 0·001), lipid peroxidation (LP) and serum high-density lipoprotein cholesterol (p < 0·001) values were significantly lower in the treatment group than in the pre-treatment group, although erythrocyte LP (p < 0·001), GSH (p < 0·01) and GSH-Px (p < 0·001), aspartate aminotransferase (p < 0·05), alanine aminotransferase (p < 0·05), density lipoprotein cholesterol (p < 0·001) and total cholesterol (p < 0·01) levels were significantly higher in the treatment group than in the pre-treatment group. Vitamins A, C and β-carotene concentrations did not change significantly between