

S-ALLYLCYSTEINE INHIBITS CIRCULATORY LIPID PEROXIDATION AND PROMOTES ANTIOXIDANTS IN N-NITROSODIETHYLAMINE-INDUCED CARCINOGENESIS

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Effects of S-allylcysteine (SAC), an organosulfur compound of garlic, on circulatory lipid peroxidation and antioxidant levels were evaluated in N-nitrosodiethylamine (NEDA)-induced hepatocarcinogenesis in Wistar rats. Significantly elevated thiobarbituric acid reactive substances in the circulation of rats bearing carcinoma indicated the higher levels of lipid peroxidation which was accompanied by significantly decreased levels of antioxidants (β -carotene, ascorbic acid, α -tocopherol, reduced glutathione, glutathione peroxidase, superoxide dismutase and catalase) when compared with controls. Lipid peroxidation has been implicated as a major cause in cancer development. SAC-administered rats showed the inhibition of tumor incidence and lipid peroxidation with simultaneous elevation in antioxidants. We suggest that SAC exerts its chemopreventive effects by decreasing lipid peroxidation and enhancing the levels of antioxidants in NDEA carcinogenesis by reducing the formation of free radicals.

Key words: *antioxidants, hepatocarcinogenesis, lipid peroxidation, N-nitrosodiethylamine, S-allylcysteine*

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