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Evaluation of Oxidative Stress, Antioxidant Status and Serum Vitamin C Levels in Cancer Patients.

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Taking into account the importance role of lipid peroxidation and antioxidants in the prevention and incidence of cancer, the present study was carried out to determine oxidative stress, serum total antioxidant (TAS), and vitamin C levels in cancer patients. Malondialdehyde(MDA), total antioxidant status, and vitamin C levels of 57cancer patients aged 19-80 years and 22 healthy subjects (control group) aged 22-76 years were evaluated. Serum concentrations of MDA as thiobarbitaric acid complexes were measured by fluorometry method, the serum TAS by using commercial test kits from Randox Laboratories, and vitamin C by using spectrophotometric method. The mean serum MDA concentrations of all cancer groups except lung cancer were significantly higher than control group ($P < 0.004$). The mean total antioxidant status was insignificantly higher than control group. The mean serum vitamin C level was significantly lower in patients as compared to the healthy subjects ($PV < 0.0001$). In conclusion, an alteration in the lipid peroxidation with concomitant changes in antioxidant defense system in cancer patients may be due to excessive oxidative stress. Serum low levels of vitamin C in the different type of cancer patients in spite of adequate daily intake may be due to increased utilization to scavenge lipid peroxides as well as their sequestration by tumor cells.

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