Retrovirology

Poster presentation

Cell Mediated And Humoral Immune Functions After Methanol Intoxication in Albino Rats

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Toxicity from methanol (MeOH), a potentially significant problem due to occupational, accidental, intentional, as well as daily ingestion of small amounts of the agent, only receives considerable attention after severe signs of intoxication have set in or death is imminent. While accidental and intentional exposures usually involve very high doses, the occupational and ingestion forms more often reflect small daily intakes. Still, even at the low levels, little is known about the potential immunotoxic implications (and less so in regard to mechanisms) from these ongoing exposures. This study has been focused on the effect of methanol on cell mediated and humoral immune function in non-immunized and immunized rats. The level of methanol used in this study was one fourth of the LD_{50} values (2.37 gm/kg b.wt). The cell mediated and humoral immune function tests were carried out in seven different groups of albino rats, namely control, 1 day, 15 days, 30 days and corresponding immunized groups were used. Sheep red blood cells (SRBC 5×10^9 cells/ ml) were used for immunizing the animals that belongs to the immunized groups. Food intake, urine output, animal and organs weight ratio, cellularity of lymphoid organs and foot pad thickness were significantly decreased when compared with respective controls. However, water intake, and leucocytes migration inhibition were significantly increased when compared with respective control groups. Antibody titre was significantly increased in non-immunized groups and significantly decreased in immunized groups. Therefore, the present study encompasses that repeated exposure of methanol profoundly suppressed the cell mediated and humoral immunity.