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## T cells are depleted in HCV-induced hepatocellular carcinoma patients: possible role of apoptosis and p53

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Egypt has possibly the highest Hepatitis C Virus (HCV) prevalence worldwide. A high proportion of HCV infections become chronic and lead to liver cirrhosis and hepatocellular carcinoma (HCC). The cellular and molecular mechanisms behind the complication of HCV infection are not completely understood although apoptosis has been implicated in this process. We examined whether T cells; isolated from patients with HCV and HCV-associated HCC (HCV-HCC); are predestined *in vivo* to undergo spontaneous apoptosis using flow cytometry. Also, the role of p53; a key in apoptotic process; in the development of HCC was examined. Our data showed that T cells were severely depleted in HCV-HCC patients and its spontaneous apoptosis was higher in patient groups as compared to normal controls as did the expression of p53, which correlated well with the HCC grade. In conclusion, HCV infection induces peripheral T cell apoptosis, depletion and subsequently immune-suppression in HCV patients and this may lead to persistence of infection. Also, p53 is implicated in the poor prognosis of HCV-HCC and could be used as a biomarker to assess the prognosis of HCC patients.