

NEUTROPHIL FUNCTION TEST IN PATIENTS WITH AMOEBIC LIVER ABSCESS

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ABSTRACT

The reduction of nitroblue tetrazolium (NBT) has been shown to be an indirect marker of phagocytic activity of the peripheral neutrophils. These neutrophils get stimulated during bacterial infection. No stimulation is recorded in viral infections. There are no studies in parasitic infections.

The NBT test was carried out by technique of Hellum(1977). The study included 21 control subjects, 14 subjects with viral hepatitis, 19 patients with amoebic liver abscess in acute stage and 13 patients of amoebic abscess of the liver in the phase of recovery.

In control subjects the mean score was 10.6 ± 5.5 per cent. In acute viral infections, the mean score was 13.6 ± 9.7 per cent with 21 per cent (3/14) subjects having positive NBT test i.e, the percent of reduced neutrophils was over 20 per cent. The difference being non-significant ($t = 1.05$) as compared to control subjects. All the amoebic liver abscess patients (19) showed positive NBT test with mean score of 76.8 ± 16.9 per cent during acute phase of illness. 7-10 days after the treatment was given to these patients, the test was repeated in 13 subjects. Five subjects (38 %) showed positive NBT test. The mean score in recovered patients was 16.5 ± 7.7 per cent. The result showed that phagocytic function is derranged in patients with amoebic liver abscess. This may be of significance to pathophysiology of this disease.

Hellum, K.B.(1977): Studies of Human Granulocyte function with special regard to the histochemical nitroblue tetrazolium test. Thesis submitted to University of Bergen, Norway.