

THE ROLE OF VIRAL INFECTION IN THE INVOLVEMENT OF THE HAEMOPOIETIC SYSTEM IN CHRONIC ACTIVE HEPATITIS

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Changes in the peripheral blood of patients with chronic active hepatitis (CAH) are not infrequent (1) but their pathogenesis has not been sufficiently elucidated. The possibility of an involvement of bone marrow reaching almost pannyelophthisis in acute viral hepatitis in man is known (2, 3). Mouse hepatitis virus was found in the bone marrow of mice with viral hepatitis (4). The occurrence of hepatitis A and B viruses in human bone marrow cells has not been proved. An immunofluorescence study of smears from bone marrow punctates from CAH patients with the use of immune sera to HBsAg and hepatitis A convalescent serum appeared, therefore, interesting.

We examined smears of bone marrow punctates from 30 patients with CAH lasting for 2-30 years. The diagnoses were based on clinical and histological data. Seven of the patients had recovered from acute viral hepatitis. In 5 of the 30 persons, HBsAg was demonstrated in their blood serum by counter-electrophoresis. Changes in the blood occurred in all but 2 patients in the form of anaemia (19 patients), leukopenia (20 patients) and thrombocytopenia (19 patients). Twenty patients, including 7 with pancytopenia, showed combined involvement of different parts of the haemopoietic system. The controls consisted of bone marrow from 10 patients with other diseases (chronic lympholeukosis, anthrax in 2 patients, idiopathic autoimmune haemolytic anaemia in 3 patients, Gilbert's benign hyperbilirubinaemia, amyloidosis, acute leukosis and myeloma).

Smears of bone marrow punctates were air-dried and subsequently fixed in absolute ethanol. In the direct immunofluorescence technique we used fluorescein isothiocyanate-labelled immune rabbit serum to HBsAg (titre of 64 in counter-immunoelectrophoresis) and infectious hepatitis A convalescent serum. The latter was absorbed with a pool of leukocytes from healthy donors (4×10^6 cells per ml of serum); its gamma-globulin fraction had a titre of 6000 in radioimmunoassay with antigen A from the commercial HAVAB kit (Abbott, U.S.A.).

Positive immunofluorescence in the cytoplasm of bone marrow cells was observed with convalescent serum in 20 patients (3 with HBsAg in serum) and with antiserum to HBsAg in 4 patients (1 with B HBsAg in serum). The findings obtained with either serum were negative in two patients with normal blood formula. In the control group immunofluorescence was positive with immune serum to HBsAg in 2 patients (acute leukosis and myeloma) and in 1 patient (acute leukosis) with convalescent serum.

The present data could suggest that hepatitis A or B virus antigens might occur in bone marrow cells of CAH patients at remote intervals after the onset of disease.

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