PubMed

Abstract

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A randomized trial to evaluate the immunorestorative properties of thymostimulin in patients with Hodgkin's disease in complete remission.

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Abstract

A total of 19 Hodgkin's disease (HD) patients (12 male, 7 female) aged 26-67 years, who had been in complete unmaintained remission for 6 months or more when the study was initiated, were randomly given 50 mg thymostimulin (TS) i.m. daily (G1) or every other day (G2) for 35 days. A third group (G3) was not treated. Then TS, at the same dose was administered twice a week for the following 22 weeks in patients both initially receiving loading or intermittent TS treatment. When compared with age- and sex-matched controls, as a group, the patients' circulating OKT3+, OKT4+, OKT11+ and E-AETR+ cells were depressed (P less than 0.001 for both proportions and absolute numbers), whereas their OKT8+ cell population was not. Following 5 weeks of daily TS administration, the proportions and numbers of all T cell fractions significantly increased in G1 patients (P less than 0.03 for all the comparisons tested), while following intermittent TS treatment (G2) only the proportions of OKT3+ and OKT11+ cells (P less than 0.03), but not of other T cell fractions, significantly increased. In addition, no significant changes in the absolute numbers of T cell fractions were observed in this group of patients. Furthermore, no spontaneous variations in the T cell pool size occurred in untreated patients. TS maintenance therapy did not produce any further improvement in the size of overall T cells and T cell subsets but sustained percentage and absolute numbers of these cells during administration and the absolute number of T cells even after discontinuation of therapy. The TS-induced improvement in the T cell pool was not associated with any change in the size of circulating non-T lymphocytes and monocytes. In vitro phytohemagglutinin-induced interleukin-2 (IL-2) and gamma-interferon (IFN-gamma) synthesis was assessed in 11 patients (3 G1, 4 G2, and 4 G3). Although it was not statistically significant, a rise in IL-2 and IFN-gamma production was observed in TS-treated patients, but not in untreated controls. TS failed to exert any effect on the serum circulating levels of neopterin, type I and II IFN, beta-2 microglobulin (B2-M) and immunoglobulins (Ig). TS can thus improve defective T cell frequences and numbers and may modulate IL-2 and IFN-gamma production.

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