Thymopentin in the Treatment of Myelodysplastic Syndromes

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Modern approaches to the treatment of myelodysplastic syndromes (MDS) are widely unsatisfactory. In the last few years, many efforts have been made in order to improve the hematologic parameters and prognosis of MDS, but up to now no stable benefit has been achieved. Very recently, an unexpected Hb level increase was noted in patients with low-grade non-Hodgkin’s lymphoma and MDS during Thymopentin (TP-5) administration [1, 2]. The exact mechanism of the stimulus of erythropoiesis by TP-5 is not yet well known, but T-lymphocyte subpopulations seem to be involved [3]. To evaluate the efficacy of TP-5, from September 1988 to May 1989, 16 patients with MDS and high blood transfusion requirement (2 or more units of red cells monthly) were treated. The study comprised 11 males and 5 females with a median age of 70.6 years, ranging from 47 to 85; according to the FAB system classification, there were 6 patients with refractory anemia (RA), 2 with syderoblastic anemia (SA) and 8 with refractory anemia with excess of blasts (RAEB). Two different schedules of treatment were subsequently employed. Nine patients received TP-5, 50 mg/m2 i.v. 5 days per week for 3 months. If a response was observed, 3 months of maintenance therapy (100 mg s.c. 5 days per week) were administered: if no response was observed, the treatment was discontinued. Seven patients received TP-5, 100 mg s.c. 5 days per week for 6 months. Two patients, 1 RA and 1 RAEB (1 for each schedule), achieved a complete response with Hb level normalization and no blood transfusion requirement: the response was observed after the first month of treatment. One patient achieved a transient partial response with a decrease of more than 50% of the blood transfusion requirement. The other patients were refractory, with no hematological improvement. WBC and platelet count were not affected by the treatment, not even in the responders. Complete responders were still in hematological remission after 17 and 15 months, respectively, without any further treatment. We would like to outline some preliminary considerations we derived from our limited study. First of all, only a small percentage of MDS patients seems to get benefit from TP-5 treatment. Immunologic abnormalities have been reported in MDS: their correction by TP-5 can explain the response observed. Unfortunately, we
cannot evidentiate prognostic factors involved in the response. Complete responders do achieve a prolonged and stable remission without blood transfusion requirement.

References