Hematologic Profile of Dialysis Patients Receiving α -Interferon and Erythropoietin Concomitantly

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Dear Sir,

Alfa interferon (α -INF) is currently used in the treatment of chronic hepatitis C which is a common problem in certain dialysis centers [1,2]. It is usually administered at a dose of 3 million units/day given subcutaneously. The frequency of injections is 3 times/week and the total duration of treatment is at least 6 months [3]. α -INF induces a series of immune reactions which result in systemic inflammation [4]. In other words, patients treated with α -INF are subject to acute systemic inflammation episodes 3 times/week. On the other hand, chronic infections and inflammatory conditions are among the well-defined causes of human recombinant erythropoietin (rHu-EPO) treatment [5].

We treated 3 regular dialysis patients with α -INF for biopsy-proven chronic hepatitis C. The patients were also receiving rHu-EPO as part of their renal replacement therapy. Their complete blood counts were followed every 2 weeks in order to avoid hematologic side effects of α -INF such as leukopenia and thrombocytopenia. Patient characteristics and their mean hemoglobin, hematocrit, white blood cell counts and platelet counts during α -INF treatment and the ensuing 8 months are summarized in table 1. The patients were dialyzed with a cuprophane membrane and acetate dialysate. The average duration of hemodialysis was 15 h/week for all the patients.

Although our observations are limited in number the results of our hematologic follow-up showed that the response to rHu-EPO was not blunted. This was rather unexpected because α -INF treatment evoked an inflammatory response 3 times each week. On the other hand, patients developed frequent episodes of thrombocytopenia and leukopenia leading to cessation of α -INF treatment during these periods. Since both drugs but mainly α -INF may lead to similar systemic reactions such as fever, malaise, arthralgias and myalgias the patients were also observed for an increased incidence of adverse reactions. All 3 patients tolerated this treatment apart from febrile episodes at the beginning of α -INF therapy which were controlled by paracetamol.

We suggest that hemodialysis patients receiving α -INF should be followed frequently in order to avoid episodes of profound leukopenia and thrombocytopenia and may be treated with the usual maintenance dose of rHu-EPO as a part of their renal replacement therapy.

References

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Table 1. Hematologic survey of 3 regular dialysis patients concomitantly receiving α -INF and rHu-EPO