Hyperleukocytosis: Emergency Management : Correspondence

Vineeta Gupta • Abhishek Abhinay

Received: 8 April 2013 / Accepted: 8 May 2013 / Published online: 6 June 2013
© Dr. K C Chaudhuri Foundation 2013

To the Editor: The recent article on “Hyperleukocytosis: emergency management” by Jain et al. [1] is informative and gives a nice working flow sheet for management of a not very uncommon emergency in pediatric patients with hematological malignancies. We have some comments and queries on the article.

The authors have rightly mentioned that leukopheresis is the treatment of choice for very high leucocyte count. However, it may be unavailable because of technical reasons. Exchange transfusion is a good alternative especially if the hemoglobin is low. If a exchange transfusion is planned, how much blood should be removed in one sitting and what should be the choice of fluid to replace this amount (if hemoglobin >7 g/dL)?

We have observed that single agent chemotherapy with steroids alongwith hydration for a couple of days in patients with total leucocyte count $>100 \times 10^3 / \mu\text{L}$ reduces the incidence of tumor lysis syndrome. Is there any role of hydroxyurea in the management of hyperleukocytosis. The literature

suggests that hydroxyurea can be used for cytoreduction with/without leukopheresis [2, 3].

Although total leucocyte count usually does not exceed $100 \times 10^3 / \mu\text{L}$ in leukemoid reaction secondary to infections, occasional patients may present with very high count. What should be the approach to manage such patients other than treatment of the underlying cause?

References

1. Jain R, Bansal D, Marwaha RK. Hyperleukocytosis: Emergency management. Indian J Pediatr. 2013;80:144–8.
2. Ganzel C, Becker J, Mintz PD, Lazarus HM, Rowe JM. Hyperleukocytosis, leukostasis and leukapheresis: Practice management. Blood Rev. 2012;26:117–22.
3. Zuckerman T, Ganzel C, Tallman MS, Rowe JM. How I treat hematologic emergencies in adults with acute leukemia. Blood. 2012;120:1993–2002.