Dysplastic Erythroblastic Islands in Paroxysmal Nocturnal Hemoglobinuria (PNH)

Preeti Tripathi¹ · Arijit Sen¹ · H. P. Pati²

Received: 26 April 2019 / Accepted: 22 June 2019 / Published online: 8 July 2019
© Indian Society of Hematology and Blood Transfusion 2019

A 26 years old primigravida was found to have severe pancytopenia at 31 weeks of gestation. She was essentially asymptomatic and physical examination did not show any abnormality other than pallor. The blood profile showed hemoglobin of 8.1 gm/dL, leukocyte count of 1.8×10^3 /cmm, platelet 20,000/cmm and absolute reticulocyte count 152×10^9 /L. Peripheral smear showed normocytic red cell and normal differential with no atypical cells. Marrow smears were hypocellular but showed relative erythroid preponderance (72%). Many erythroblastic islands with associated macrophages (nurse-cells) were noted showing

significant dyspoietic features (Fig. 1). Granulocytes and megakaryocytes were unremarkable. Bone biopsy showed cellularity of 20–30%, erythroid prominence and preserved myeloid and megakaryocytes. (Fig. 2). Cytogenetics study was normal but flowcytometry showed positive PNH clone in neutrophils (46%) and monocytes (38%) with FLAER. She was given supportive treatment for the rest of her pregnancy and delivered healthy baby at 35 weeks gestation. Erythroblastic islands with significant dyspoiesis is an interesting finding in marrow. This case highlights the fact that not all dysplasias is MDS-related. PNH as a secondary

✉ Preeti Tripathi
contactdoctorpreeti@gmail.com

Arijit Sen
aseniat@gmail.com

H. P. Pati
harappati@yahoo.co.in

¹ Department of Laboratory Medicine, Command Hospital Airforce, Room No 21, Second floor, Bangalore 560008, India

² Department of Hematology, All India Institute of Medical Sciences, New Delhi India

Fig. 1 Leishman–Giemsa stained bone marrow aspirate smears (100 × oil) showing enlarged view of erythoblastic islands with marked dyserythropoiesis

Fig. 2 Hematoxylin–eosin stained bone marrow biopsy showing hypoplastic marrow with relative erythroid prominence

cause must be excluded, especially if significant dyserythropoiesis is noted in the setting of marrow hypocellularity.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.