

LETTER TO EDITOR

Benign blast-like “Baby Lymphocytes” or “Infant Lymphocytes” are common in peripheral blood smears of newborns and infants: Not to be misconstrued as neoplastic blasts!

Samir B. Kahwash^{1,2*}, Blake Roseberry¹

¹Department of Pathology and Laboratory Medicine, Nationwide Children’s Hospital, OH, 43205,

²The Ohio State University College of Medicine, Columbus, Ohio 43205.

To the Editor:

A 14-day-old boy, born prematurely at 35-week gestational age, for a diabetic mother, presented to the hospital for an elective circumcision. A complete blood count (CBC) showed WBC= $14.1 \times 10^3/\mu\text{L}$, RBC= $4.68 \times 10^6/\mu\text{L}$, Hb=13.5 g/dL, MCV=87 fL, Platelet count= $518 \times 10^3/\mu\text{L}$. A preliminary manual differential cell counts by a technologist reported the following results: Segmented neutrophils=18%, Band Neutrophils=3%, Lymphocytes=61%, Monocytes=10%, Eosinophils=3%, Myelocytes=1%, Blasts=4%* (* pending review by a pathologist). A review by a pathologist noted atypical blast-like cells that appeared by morphology to represent the so called “infant” or “baby” lymphocytes (Figure 1). Despite having a high nuclear cytoplasmic ratio, irregular nuclear membrane and small nucleoli, their small size, clumped chromatin, the normal for-age CBC, and clinical context of very young age should help separate these blast-like benign cells from neoplastic blasts.

Infant lymphocytes are only rarely discussed or illustrated in the literature¹, despite the potential of confusing them with blasts. They are commonly seen in newborns and infants in decreasing numbers up to around one year of age. Accurate recognition of the transient occurrence and benign nature of these cells can help avoid unnecessary concern or unjustified work-up.

Upon follow-up, the infant in this case is healthy and symptom-free one year following this encounter.

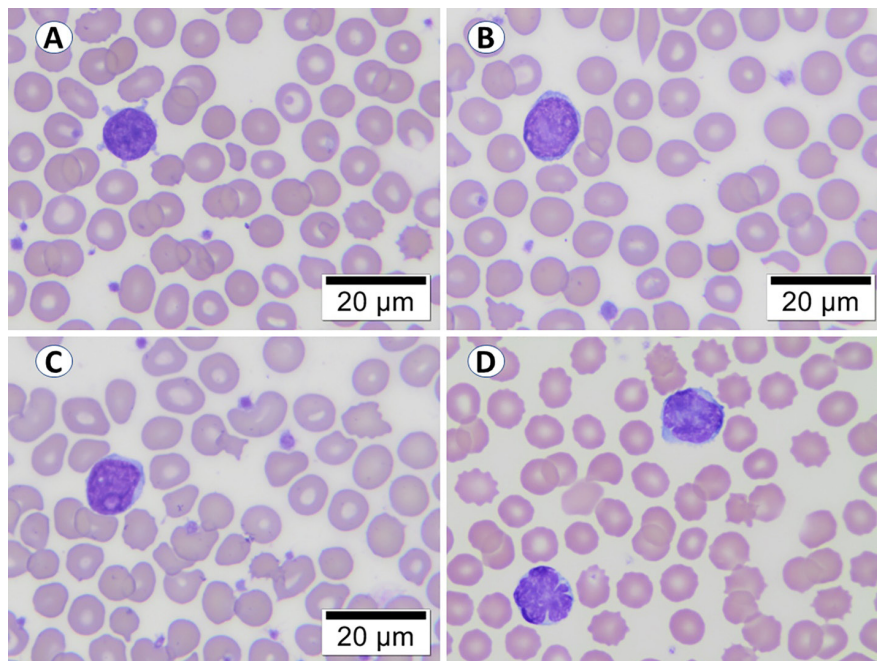


FIG. 1: The so called “Infant lymphocytes” or “baby lymphocytes” (magnification 100X oil). Note the high nuclear/cytoplasmic ratio (A, B, C and D), small nucleoli (B and C) and irregular nuclear membrane (D).

*Address for correspondence: Samir Kahwash, M.D. Department of Pathology and Laboratory Medicine, Nationwide Children’s Hospital, 700 Children’s Drive, Columbus, OH 43205. P 614-722-5427. F 614-722-5308. Email: samir.kahwash@nationwidechildrens.org

Acknowledgement: The authors thank Beverly Farley for her administrative help with the manuscript.

Authors' contributions: Dr. Samir B. Kahwash wrote the manuscript in draft, and prepared figure. Blake Roseberry reviewed and edited the manuscript.

Conflict of Interests: The authors declare no conflict of interests.

REFERENCE

1. Rose G, Reinhard H, Kahwash SB: Is this a blast? An illustrated practical review on peripheral blood smears examination in the paediatric patient: Malays J Pathol. 2020; 42(1):37-49.