The CellMek SPS system helps you unlock the power of lean by addressing major process wastes related to sample preparation in your clinical flow cytometry laboratory. Drives Efficiency via Automation. Standardizes Processes & Reduces Potential for Error. Ensures Flexibility Via User-Defined Protocols. Provides Confidence in Results facilitated by a full audit trail. Frees up lab staff to deal with more value-added tasks.

beckman.com/cellmek-sps

The CellMek SPS System is CE marked and FDA listed (Class I exempt) and is available in countries that accept the CE mark as the basis for their country-specific registration.

© 2022 Beckman Coulter, Inc. All rights reserved. Beckman Coulter, the stylized logo, and the Beckman Coulter product and service marks mentioned herein are trademarks or registered trademarks of Beckman Coulter, Inc. in the United States and other countries. All other product names and brands are properties of their respective owners.

For Beckman Coulter’s worldwide office locations and phone numbers, please visit Contact Us at beckman.com

22.01.2740 FLOW
Peripheral CD5+ CD10+ B-cell proliferation with atypical morphology attributable to human herpesvirus 6 infection following umbilical cord blood transplantation

Alban Canali1 | Jean-Baptiste Rieu1 | Barbara J. Bain2

1Haematology Laboratory, Cancer University Institute of Toulouse – Oncopole, Toulouse, France
2Centre for Haematology, St Mary’s Hospital Campus of Imperial College Faculty of Medicine, St Mary’s Hospital, London, UK

Correspondence
Barbara J. Bain, Department of Blood Sciences, St Mary’s Hospital, Praed Street, London W2 1NY, UK.
Email: b.bain@imperial.ac.uk

A 21-year-old man was under follow-up after a second hematopoietic stem cell transplant with umbilical cord blood (UCBT) for relapsed acute myeloid leukemia. One month after UCBT, he was in complete remission with incomplete count recovery (CRI, hemoglobin concentration 85 g/L, platelets 13 × 10⁹/L, and neutrophils 1.2 × 10⁹/L). Donor chimerism was 100%. Eleven days later, a sudden increase in the lymphocyte count from 0.5 to 2.1 × 10⁹/L was observed concomitantly with human herpesvirus 6 (HHV6) reactivation with a peripheral blood viral load at log 3.32 copies/mL. Examination of the blood film revealed 41% large atypical lymphocytes with a high nucleocytoplasmic ratio, irregular nucleus, decondensed chromatin with indistinct nucleoli, and weakly basophilic cytoplasm with irregular protrusions (images May-Grünwald-Giemsa, ×100 objective). Flow cytometric immunophenotyping showed polyclonal CD19+ B cells (87% of lymphocytes) with a particular CD5+ CD10+ CD24+ CD38+ CD27− profile indicative of regulatory B-cell (Breg) proliferation. The absence of CD27 in this population showed that it was probably derived from the UCBT.1 Since the general condition of the patient was good (WHO performance status 1) and physical examination was normal, no antiviral treatment was required. One hundred days after UCBT, he was still in CRI but with an improvement in the platelet count (46 × 10⁹/L). Breg lymphocytosis was still present and was fluctuating as was the HHV6 viral load.

HHV6 infection is well documented in adult patients following UCBT.2 A higher prevalence of Breg in human cord blood compared to peripheral adult blood has also been demonstrated.1 Here we describe the cytological and immunophenotypic features of Breg lymphocytes in the peripheral blood of an adult patient with HHV6 infection following UCBT. It is important that these reactive cells are not confused with neoplastic cells.

CONFLICT OF INTEREST
The authors declare no conflict of interest.
REFERENCES


How to cite this article: Canali A, Rieu J-B, Bain BJ. Peripheral CD5+ CD10− B-cell proliferation with atypical morphology attributable to human herpesvirus 6 infection following umbilical cord blood transplantation. Am J Hematol. 2022; 97(11):1489-1490. doi:10.1002/ajh.26655