(SLL). Although it is relatively rare, appearing in 2% to 10% of CLL patients, RS often proves to be lethal due to its rapid progression and the scarcity of specific therapies. Venetoclax, a BCL2 inhibitor, has demonstrated efficacy in CLL but its role remains less explored in RS. Hence, there is a paucity of information regarding the direct employment of Venetoclax in the treatment regimen for RS. This study presents a case of Richter transformation being managed under treatment with Venetoclax. **Case report: Case:** A 51-year-old female patient, diagnosed with CLL with negative 17p deletion following investigations in 2015 due to autoimmune immune thrombocytopenia (ITP) and lymphocytosis, was given 6 cycles of FCR (fludarabine, cyclophosphamide, rituximab) due to steroid-resistant autoimmune thrombocytopenia, and complete response (CR) was achieved according to iwCLL criteria. After remission, the patient was monitored without treatment, and in 2020, full blood count, biochemical analysis, and peripheral smear were performed due to fatigue symptoms. The complete blood count showed leukocytes: 44600/mm3, lymphocytes: 39000/mm3, MCV: 86 fl, and hemoglobin: 9.5 g/dL. The patient, with no signs of hemolytic anemia, had no nutritional (Fe, B12, folate) deficiency, and normochromic normocytic anemia was detected. There were no mutations in the immunoglobulin heavy chain variable region (IGHV) genes. The patient, evaluated as relapsed stage 3 disease, was started on venetoclax-rituximab treatment. In the 11th month of the treatment, due to symptoms of fatigue, fever, night sweats, and weight loss, a bone marrow biopsy was performed after pancytopenia was observed, and a diagnosis of diffuse large B-cell lymphoma was made. Due to Richter transformation, DA-R-EPOCH (dose-adjusted rituximab, etoposide, prednisolone, vincristine, cyclophosphamide, doxorubicin) treatment was initiated. After 4 cycles of DA-R-EPOCH treatment, single-agent ibrutinib was started due to treatment-resistant disease and an ECOG performance score of 2. The patient, whose disease continued to progress under ibrutinib treatment, died from septic shock. **Conclusions:** This case underscores the complexities in treating Richter syndrome, particularly with venetoclax, and emphasizes the need for careful monitoring and understanding of potential transformations. The development of Richter transformation under venetoclax treatment highlights an area that requires further investigation and consideration in the management of CLL. Prospective studies and a comprehensive approach are vital to enhancing treatment strategies and improving outcomes for patients with this aggressive form of lymphoma.

https://doi.org/10.1016/j.htct.2023.09.055

Adult Hematology Abstract Categories

Chronic Myeloproliferative Diseases
PP 06

BIOMEDICAL ANALYSIS OF RED BLOOD CELLS IN POLYCYTHEMIA VERA, APPLICATION OF RAMAN SPECTROSCOPY

Weronika Lebowa [1], Jakub Dybaś [2], Stefan Chłopicki [2], Tomasz Sacha [3]

[1] *Department of Hematology, University Hospital, Jagiellonian University Medical College, Krakow, Poland*
[2] *Jagiellonian University Medical College, Doctoral School of Medical and Health Sciences, Faculty of Medicine, Krakow, Poland*
[3] *Jagiellonian Centre for Experimental Therapeutics, Krakow, Poland*

Objective: Polycythemia vera (PV) is a chronic myeloproliferative neoplasm characterized by increased red blood cell mass. Excess erythrocytosis leads to elevated hematocrit, resulting in increased blood viscosity, a condition that promotes thrombosis. For years, red blood cells (RBCs) in PV were considered to be morphologically and functionally normal. This analysis aimed to check whether there are biochemical alterations in RBCs in PV that may be associated with thrombotic complications. **Methodology:** We included 5 patients with PV and 5 healthy individuals in the preliminary analysis of the biochemical properties of isolated RBCs focused on different forms of hemoglobin and heme. The analysis was conducted using Raman spectroscopy. **Results:** The results of the Raman spectra obtained from isolated RBCs suggest a larger contribution of ferrous heme iron in the sample of a patient with PV compared to a control sample. In the PV sample, a greater contribution of the high-spin heme iron, a molecular state typical for deoxyhemoglobin, was observed, which stays in line with higher ferrous content. The effect may indicate a weaker linkage of the protein with oxygen. **Conclusion:** Our analysis suggests the occurrence of biochemical alterations in RBCs in PV, together with RBC overproduction. Changes in the structure of hem and hemoglobin affect oxygen affinity. Our future study will focus on determining if described alterations in RBCs may contribute to the pathogenesis of thrombotic complications in PV.

https://doi.org/10.1016/j.htct.2023.09.056

PP 07

DISCONTINUATION OF TYROSINE KINASE INHIBITORS IN TUNISIAN CHRONIC MYELOID LEUKEMIA PATIENTS

Rim FRIKHA [1], Moez ELLOUMI [1], Hassen KAMOUN [1]

[1] *UNIVERSITY HOSPITAL OF SFAX-TUNISIA*

Objective: Some patients who achieve deep molecular remission (DMR) can successfully discontinue tyrosine kinase