Safety and Efficacy of Venetoclax as Treatment in Patients With Poor Risk Acute Myeloid Leukemia – A Single Centre Experience

Melinda Tan, Zay Yar Myint, Chandramouli Nagarajan, Linn Yeh Ching, William Hwang, Ng Heng Joo, Wong Gee Chuan

Singapore General Hospital

Aims: Venetoclax is an oral selective BCL - 2 inhibitor that has shown promising safety and efficacy results when given upfront in the treatment of Acute Myeloid leukemia (AML). In this study, we aim to examine the efficacy of Venetoclax in patients with poor risk AML from a single tertiary centre in Singapore.

Methodology: The baseline characteristics and outcomes of patients with poor risk AML who were treated with Venetoclax were identified from our institutional disease registry.

Result: We included 13 patients in this series, 5 had adverse risk cytogenetics, 1 had intermediate risk cytogenetics but experienced primary induction failure and 7 had secondary AML. Patients with secondary AML progressed from myelodysplastic syndrome, myeloproliferative diseases or were treatment - related. Venetoclax was given as a single agent in 2 patients, and in combination with 5 - Azacytidine and low - dose Cytarabine in 9 and 2 patients respectively. The median number of cycles of chemo prior to initiation of Venetoclax was 3. The median number of cycles of Venetoclax administered was 2. Only 2 patients attained hematological remission, with the time to hematological remission being 1 cycle in the first patient. The second patient started Venetoclax while in hematological remission, and maintained remission for 11 cycles. The main treatment related adverse events were cytopenias and 4 patients required dose reduction of Venetoclax. Venetoclax was stopped in view of febrile neutropenia in 1 and progressive disease in 5 patients. There were 4 deaths within 30 days of starting Venetoclax and these were attributed to progressive disease in 3 and intracranial hemorrhage in 1.

Conclusion: In our series of patients, responses with the use of Venetoclax in the salvage setting in patients with poor risk AML are poor. As such, Venetoclax should be considered for use in the upfront setting in the treatment of AML.