Abstract: P531

Title: MIDOSTAURIN PLUS 7+3 OR QUIZARTINIB PLUS 7+3 IN FLT3-ITD MUTATED AML

Abstract Type: Poster Presentation

Session Title: Acute myeloid leukemia - Clinical

Background:

Midostaurin (Midos) plus 7+3 is currently the standard of treatment for FLT3 (ITD and TKD) mutated AML based on an improvement in overall survival noted in the RATIFY phase 3 trial (Stone et al, N Engl J Med 2017). The QuANTUM first trial, recently reported, showed a significant benefit for OS for the experimental arm Quizartinib (Quizart) plus 7+3 in AML FLT3-ITD (Erba H., EHA 2022). Midos vs Quizart associated with intensive chemotherapy (IC), in front line, have been not directly compared.

Aims:

The aims of this study are to analyze safety and effectiveness of Midos in FLT3-ITD AML in a "real-world" setting and to compare with previously reported phase 3 trials RATIFY and QuANTUM first.

Methods:

We carried out a multicenter study (MDA-AML-2018-06) in 27 Spanish centers. Inclusion criteria: age >18 years, FLT3-mutated AML diagnosis according to WHO criteria and start of treatment with Midos in combination with IC between June 2016 and December 2020. We evaluated the response according to 2017 ELN criteria, toxicity according to CTCAE v5.0 and overall survival (OS) by Kaplan-Meier. Statistical analysis was performed using SPSS program version 20.0.

Results:

A total of 175 (93 female) patients (pts) were included, median age 53 years [18-76], median OS for the whole population not reached, 24months OS 68%. Of those, 133 were FLT3-ITD mutated with AML median age of 52 years [18-76]; 40 pts were 60 years old and above. Eighty pts had ECOG <2 and 74 pts had high alelic ratio (AR) (≥0.5).

Based on ELN 2017 criteria 30 pts had low (<0.5) AR and mutated NPM1; 58 pts had low (<0.5) AR without NPM1 or high (≥0.5) AR with NPM1 and 23 pts had high (≥0.5) AR without NPM1. Total Midos cycles were 393 (median 2), 11 pts (8.3%) suffered QT prolongation. There were no deaths related to Midos.

Effectiveness: 111 (83.4%) pts achieved CR after Induction 1 or 2, of them 55 pts (49.5%) were consolidated with alloSCT. With a median follow up of 13.5 months the median OS was not reached, and the 2 years OS was 65%. In our experience AR (≥0.5) resulted in differences for OS (p 0.04). ELN 2917 classification shows differences for the low risk group but not between intermediate and high risk groups. ECOG<2 and age <60 showed a trend but no significant difference for OS. In our study CR and alloSCT in CR1 rate and 2 years OS seams superior as previously reported in phase 3 trials.

Summary/Conclusion: In our experience Midos plus IC as first line in FLT3-ITD AML patients is highly effective CR 83.4% and 2years OS 65%. Interesting that this seam superior as reported with quizartinib phase 3 trial. Comparative studies are needed to demonstrate these results.

Keywords: Acute myeloid leukemia