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POSTER ABSTRACTS

615.ACUTE MYELOID LEUKEMIAS: COMMERCIALLY AVAILABLE THERAPIES, EXCLUDING TRANSPLANTATION AND CELLULAR IMMUNOTHERAPIES

Venetoclax Combined with HMA Versus CAG Based Chemotherapy in Acute Myeloid Leukemia: A Propensity Score Matched Analysis

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Abstract

Background:

Venetoclax(VEN) combination with hypomethylating agent(HMA) are lower-intensity regimens with safety which are widely used for older patients with newly diagnosed acute myeloid leukemia (AML). On the other hand, regimen of cytarabine, aclarubicin and G-CSF (CAG) with or without HMA is also of low-intensity usually applied to older AML patients. The comparison of outcomes of these two regimens has not been reported. In this study, we performed a multicenter, retrospective propensity score-matched study to compare the therapeutic responses and survival outcomes of newly diagnosed AML patients with induction of HMA-VEN to those with CAG based treatment.

Methods:

Newly diagnosed AML patients treated either VEN/HMA or CAG with or without HMA between January 2013 and April 2023 were compared. Age at diagnosis, sex, ECOG performance status, state of fitness for intensive chemotherapy according to Ferrara criteria and ELN2017 risk group were used to construct the propensity score using logistic regression. Propensity score matching was performed in a 1:1 ratio with a calliper value of 0.02. The treatment response, relapse rate, duration of remission, overall survival (OS) were compared between the two groups.

Results:

A total of 98 out of 109 newly diagnosed patients treated with VEN/HMA were matched to 98 out of 159 newly diagnosed patients treated with CAG based therapy. The patients in VEN/HMA cohort were treated between February 25, 2021 and April 30, 2023. The CAG based treatment recipients were treated from January 25, 2013 to November 12, 2021. The CAG based treatment cohort which was termed as "CAG cohort" below matched closely with the VEN/HMA cohort in terms of baseline characteristics and propensity scores (Table1). The median age was 62 years (range, 52-67) in VEN/HMA cohort and 63 years (range,52-68) in CAG cohort, and the median follow-up period was 6.3 months (range,3.2-14.0) in VEN/HMA cohort and 12 months (range,3.8-28.3) in CAG cohort.

Patients treated with VEN/HMA achieved a significantly higher rate of CRc (82.4% vs 60.6%, P=0.002) compared to CAG cohort, with 36.5% in CR, 45.9% in CRi in VEN/HMA cohort and 30.3% in CR, 30.3% in CRi in CAG cohort. There was no statistic difference of the CRc rate between CAG versus CAG plus HMA(35.7%,n=14 vs 60.5%,n=76, p=0.085). CRc in the VEN/HMA and CAG cohort were 100% vs 85.7(p=0.483), 75.9% vs 46.9%(p=0.021), 64.3% vs 45.2%(p=0.079) in the ELN2017 favorable, intermediate and adverse risk group, respectively. The MRD-negative remission rate was higher in VEN/HMA cohort compared to CAG cohort (85.5% vs 61.2%, p= 0.003). The MRD-negative remission rate in the VEN/HMA and CAG cohort were 91.6% vs 80.0%(p=0.571), 88.0% vs 66.6%(p=0.188), 83.9% vs 45%(p=0.003) in the ELN2017 favorable, intermediate and

adverse risk group, respectively(Table2). Responses of patients with different mutations were analyzed and ASXL1 predicted higher CRc rate with VEN/HMA treatment compared to CAG based treatment (92.3% vs. 40%, p= 0.019).
The median OS was not reached in VEN/HMA cohort and 18 months in CAG cohort(p=0.16). Patients who achieved CRc had longer survival than those without CRc (not reached vs 6.4m, p<0.001). Patients who got MRD negative remission had better survival than those only with MRD positive remission (not reached vs 11.8m, p=0.0002). Patients who underwent allogeneic HSCT had longer survival than those didn't receive transplantation (not reached vs 12.3m, p<0.001).

Conclusions:

With propensity score-matched analysis, our data show that VEN/HMA demonstrates better treatment response than CAG regimen in patients with newly diagnosed AML. The survival outcome benefits from MRD negative response and allogeneic HSCT.

Disclosures No relevant conflicts of interest to declare.

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Table 1. Baseline characteristics of propensity score matched patients

Patient characteristics	VEN/HMA cohort (N=98)	CAG cohort (N=98)	p-value
Age, years	62(52-67)	63(52-68)	0.607
≤60yrs	40(41)	41(42)	1.000
> 60yrs	58(59)	57(58)	0.421
Gender,N(%), male/female	55(56.1)/43(43.9)	59(60.2)/39(39.8)	0.562
Bone marrow blasts, %	64(37-80)	49(30-72)	0.027
ECOG			
0-2	67(68.4)	66(67.3)	0.878
3-4	31(31.6)	32(32.7)	
ELN 2017 risk group			
Favorable	13(13.5)	15(15.6)	
Intermediate	36(37.5)	36(37.5)	0.911
Adverse	47(49.0)	45(46.9)	
suitable for intensive therapy			
Fit	72(73.5)	71(72.4)	0.872
Unfit	26(26.5)	27(27.6)	

Table 2. Outcome of VEN/HMA and CAG cohort

Outcomes	VEN/HMA cohort (N=98)	CAG cohort (N=98)	p-value
Induction response, N (%)			
CRc(CR+CRi)	70(82.4)	54(60.6)	0.002
CR	31(36.5)	27(30.3)	0.391
CRi	39(45.9)	27(30.3)	0.035
MRD-Negative	59(85.5)	30(61.2))	0.003
CRc according to ELN 2017 risk group, N (%)			
Favorable	12(100)	12(85.7)	0.483
Intermediate	22(75.9)	15(46.9)	0.021
Adverse	27(64.3)	19(45.2)	0.079
MRD-Negative according to ELN 2017 risk group, N (%)			
Favorable	11(91.6)	8(80.0)	0.571
Intermediate	22(88.0)	12(66.6)	0.188
Adverse	26(83.9)	9(45.0)	0.003
Relapse			
Relapse rate of patients with CRc, N (%)	14(23.0)	14(29.8)	0.422
Duration of response, median (range)	NR	NR	/
Survival			
Median follow-up, months	6.3(3.2-14.0)	12.0(3.8-28.3)	0.002
Median OS, months	NR	18	0.159

Figure 1

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