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Feasibility of Outpatient Induction in Adolescent and Adult Patients with Acute Myeloid Leukemia in a high-volume center

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INTRODUCTION

- Delayed treatment initiation in AML patients leads to detrimental outcomes.
- At our high-volume centre, there is an average 3-week delay (Jain H, JGO. 2020)

AIM

To determine the safety and feasibility of outpatient induction of adolescent and adult AML patients.

METHOD

Study design:

- Single-center, prospective, open label, pilot trial conducted between March 2021 to May 2023
- Ethics approval obtained and CTRI Registration Number: CTRI/2020/09/027654

Total sample size: 30 participants

Study population:

- Newly diagnosed patients with AML aged 15 to 65 years, performance score ≤1, baseline WBC count <20 × 10^9/L, normal organ function, no active infection or bleeding and accessibility to hospital within 1 hour were enrolled either before induction or on day 9-10.

RESULTS

Table 1. Baseline characteristics of patients

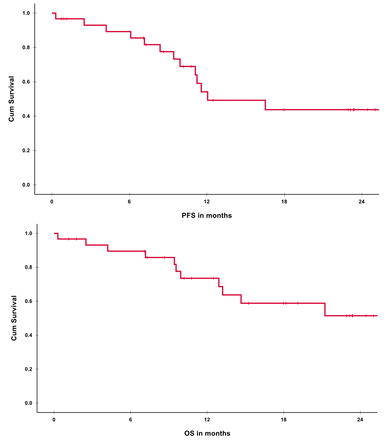
Patient Characteristic	N=30
Age at diagnosis (years), median (min-max)	25 (15-46)
Gender, n (%)	
Male	19 (63.3%)
Female	11 (36.7%)
TLC (cells/mm^3), median (IQR)	5630 (2255-9555)
Hemoglobin (g/dL), median (IQR)	7.2 (6.8-8.4)
Platelet count (x10^9/L), median (IQR)	38.5 (24-111)
Albumin (g/dL), median (IQR)	4.2 (3.7-4.4)
ELN risk group, n (%)	
Favorable risk	16 (53.3%)
Intermediate risk	13 (43.3%)
Adverse risk	1 (3.3%)
TDT (days), median (min-max)	4.5 (0-23)

Table 2. Outcomes of 30 patients receiving outpatient induction

Clinical outcomes, n (%)	N=30 (%)
Post-induction remission status	
CR/CRi¶	14 (46.7%)
Not in CR with MRD negative†	4 (13.3%)
Not in CR with MRD positive‡	11 (36.7%)
Not evaluated	1 (3.3%)
No. of readmissions post enrolment	
None	3 (10%)
1	23 (76.7%)
2	4 (13.3%)
Length of hospital stay, *median (min-max)	15 (0-26)
Febrile Neutropenia	28 (93.3%)
Documented blood stream infections	6 (20%)
Invasive fungal infections	
Probable	2 (6.7%)
Possible	6 (20%)
ICU admissions	0
Inotrope requirement	2 (6.7%)
28-day Induction mortality	1 (3.33%)

¶ CR/CRi denotes morphological remission post-induction (<5% blasts), † Not in morphological remission (blasts >5%) and minimal residual disease <0.1% or >0.1% ‡ by flow cytometry,* Duration of hospital stay till day 28 of induction in days

Figure 1. Kaplan-Meier curves for Progression free survival (PFS) and Overall survival (OS)



After a median follow-up of 19 months, the median PFS was 12.1 months [95% CI, 4.9 to 19.2]. The median OS was not reached.

The 2-year PFS and OS was 43.8%, and 51.5% respectively.

CONCLUSIONS

- Outpatient induction model was feasible in reducing time-to-treatment initiation.
- There was no increased risk of induction mortality compared to historical cohort.

REFERENCES

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