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ELEVENTH ANNUAL MEETING

Clinical Outcomes of Patients with High-Risk Acute Promyelocytic Leukemia (APL) Treated with All-Trans Retinoic Acid (ATRA)/Arsenic Trioxide (ATO)–Based Induction and Consolidation without Maintenance Therapy: A Single-Institution Study

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CONTEXT

Patients with high-risk APL have a worse event free-survival than low-risk APL patients. Maintenance therapy improves disease-free survival in high-risk APL patients treated with ATRA plus chemotherapy as induction and consolidation therapy. The role of maintenance therapy in patients treated with a chemotherapy-free regimen of ATRA plus ATO is controversial

OBJECTIVE

Analyze outcomes of high-risk APL patients treated without maintenance therapy at our institution

DESIGN

Retrospective study of patients with high-risk APL patients treated between January 1, 2014, and December 31, 2021, at Memorial Hermann Hospital, Texas Medical Center

SETTING

General community, academic hospital setting

PATIENTS /PARTICIPANTS

Patients (>18 years old) with high-risk APL

MAIN OUTCOME MEASURES

Rate of complete response (CR) and long-term survival

RESULTS

We identified 12 patient with high risk APL.

The median white blood cell count was 32 K/μμL, and the median bone marrow (BM) blast count was 80%.

Median age	35.5 years (range, 20–67)
Race	white (n=7), African American (n=2), Asian (n=1), and Hispanic (n=2)
Sex	Men (5) women (7)

Treatment	Number pf patients
ATRA+ATO for induction	12
idarubicin	9
daunorubicin	1
gemtuzumab ozogamicin	2
Hydroxyurea and cytarabine for cytoreduction	2

Median time	days
diagnosis to postinduction BM biopsy	25 (range, 22-31

status	Number of patients
CR after induction	12
positive PML-RARA fusion transcript on post-induction BM aspiration and biopsy	12
molecular CR after consolidation (negative for PML-RARA)	12
relapsed 4 months after completion of consolidation therapy and achieved a second CR with ATRA and ATO	1

Median follow-up	months
Post-induction	41.5
Post-consolidation	33.5

Status	Number of patients
Alive and in CR	12 (100%)

CONCLUSIONS

High-risk APL patients can be successfully treated with ATRA/ATO-based induction and consolidation without maintenance therapy, thus avoiding the long-term toxicities of maintenance therapy

REFERENCES

Shah G et al. Omission of Maintenance in Patients with High-Risk Acute Promyelocytic Leukemia (APL) in the Era of ATRA/Arsenic Consolidation. Blood (2018) 132 (Supplement 1): 5192.

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