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abstract

Clinical Profile And Outcome Of Pediatric Acute Promyelocytic Leukemia (APL) Treated With Chemotherapy Free Regimen: Long Term Follow Up

Mubashir Hassan Shah, Javid Rasool

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Clinical Profile And Outcome Of Pediatric Acute Promyelocytic Leukemia (APL) Treated With Chemotherapy Free Regimen: Long Term Follow Up

Authors: *Mubashir Hassan Shah, Javid Rasool*

Affiliation*: Government Children Hospital Bemina Srinagar*

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Introduction: Acute promyelocytic leukemia (APL) represents a distinct subtype of paediatric acute myeloid leukemia with excellent outcomes. Most of the protocols used in treatment of paediatric APL consist of varying doses of chemotherapeutic drugs like anthracyclines. Here, we present our data of paediatric APL (<18years) treated with chemotherapy free protocol with All Trans Retinoic Acid (ATRA) and Arsenic trioxide with excellent outcomes. Objective was t o study the clinical profile and outcome of pediatric APL patient treated with ATRA and Arsenic trioxide without any chemotherapy.

Methodology: A retrospective study of children and adolescents diagnosed as APL from January 2017 till December 2023 was done in Tertiary care hospital of North India. Patients presenting with WBC<10,000 were stratified as low-risk and were treated with ATRA and Arsenic trioxide without any chemotherapy. Baseline clinical and laboratory features, complications of treatment and outcomes were analyzed.

Results: Out of 32 patients treated, 20(62%) had low-risk APL and 17 (85%) presented with bleeding manifestations with one patient presenting with intracranial bleed. Response to therapy was excellent with 100% (19) of evaluable patients achieving molecular remission by the end of consolidation phase. Differentiation syndrome occurred in 13 (65%) which was managed with steroids. Early mortality rate was 5% (1) and was due to intracranial haemorrhage at the time of presentation.

The 2-yr overall survival of the entire cohort was 95% (95% CI: CI: 85-97%) with only mortality being in in the induction phase. None of the patients with relapsed till last follow up.

Conclusion: Long term outcome of children with low-risk APL treated with ATRA and Arsenic Trioxide without chemotherapy is excellent. Timely management of coagulopathy and prophylactic use of steroids for differentiation syndrome can further decrease the early mortality.