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abstract

Excellent Long-Term Survival of Down Syndrome with Myeloid Leukaemia at a Single Tertiary Centre in Malaysia

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abstract

Excellent Long-Term Survival of Down Syndrome with Myeloid Leukaemia at a Single Tertiary Centre in Malaysia

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Introduction: Children with Down Syndrome are predisposed to developing erythromegakaryoblastic leukaemia, better known as Myeloid Leukaemia of Down Syndrome (ML-DS). Previously used reduced- intensity regimens were associated with poor outcomes due to disease resistance or recurrence.

Methodology: We retrospectively reviewed all children with ML-DS treated at Hospital Kuala Lumpur / Hospital Tunku Azizah (HTAKL) between January 2014 and December 2023.

Results: Thirty-six patients were identified. The median age at diagnosis was 18 months old. Twelve patients (33%) had Transient Abnormal Myelopoiesis (TAM). None had central nervous system involvement. At diagnosis, the median platelet count was 34,000/uL. Only 15 patients (41.7%) had > 20% blasts in their bone marrow. Two patients who refused treatment died of the disease.One patient with uncontrolled disseminated Staphylococcus aureus infection died before treatment could be given. One patient with severe pneumonia died within 24 hours of Cytarabine infusion.

One patient died of severe Influenza A pneumonitis after completion of his first course of chemotherapy. All 31 patients who completed chemotherapy based on the ML-DS 2007 protocol achieved remission after the first course. There were no relapses. The 5-year overall survival was 86.1%. Three patients required paediatric intensive care unit (PICU) admission for ventilatory support, but none required inotropic support. None died of bacterial infection.

Conclusion: Excellent long-term survival can be achieved in children with ML-DS treated with the ML-DS 2007 protocol.