referral bias and delayed diagnosis and may be responsible for the high number of patients with hyperleukocytosis. Early mortality remains high, despite despite almost complete coverage of patients receiving ATRA within the first 24 hours of admission in recent years, underscoring the need for improved pre-admission management. NRM during consolidation phases appears to have been influenced by the high incidence of cases related to prior cancer therapy in our cohort and deserves special attention Despite high curability, APL management in the public health system faces structural barriers. Ensuring early diagnosis, rapid referral to experienced centers, as well as intensive supportive care, are critical to reduce mortality and improve outcomes.

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ADVANCES IN CHEMOTHERAPY PROTOCOLS FOR CHILDHOOD LEUKEMIAS: EFFICACY, NEW THERAPIES AND CHALLENGES

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Introduction: Acute Lymphoblastic Leukemia (ALL) represents approximately 75% of childhood leukemia cases, with survival rates now exceeding 90% in high-income countries due to therapeutic advances. This review evaluates recent improvements in chemotherapy protocols, focusing on comparative efficacy between traditional regimens and novel approaches incorporating targeted therapies and immunotherapies. **Objectives:** To analyze survival outcomes, treatment efficacy, and cost-effectiveness of contemporary chemotherapy protocols for pediatric ALL, with emphasis on emerging therapeutic strategies. **Material and methods:** An integrative literature review was performed following the PICCO framework. Searches in PubMed and Cochrane databases employed Boolean operators, limited to studies published within the last five years. Selection criteria included clinical trials and systematic reviews addressing pediatric ALL treatment in hospital settings, while excluding diagnostic or prophylactic studies. After PRISMA-guided screening and duplicate removal, 13 studies met inclusion criteria. **Results:** The analysis revealed significant progress in treatment protocols. The ALL-B12 regimen demonstrated superior survival rates (≥90%) through intensified chemotherapy combining pulsed vincristine/dexamethasone with high-dose methotrexate and PEG-asparaginase, while showing reduced toxicity compared to conventional asparaginase. Immunotherapies exhibited remarkable outcomes, particularly in high-risk and relapsed cases. Blinatumomab improved survival rates while proving more cost-effective than standard chemotherapy. CAR-T cell therapy (tisagenlecleucel) achieved durable remission in refractory cases, and inotuzumab ozogamicin showed high response rates in relapsed B-cell ALL. The combination of venetoclax with chemotherapy enhanced survival in relapsed AML. Despite these advances, higher costs and infrastructure requirements for novel therapies pose challenges for implementation in resource-limited settings, highlighting disparities in global accessibility. **Discussion and conclusion:** Contemporary treatment protocols integrating chemotherapy with immunotherapy and targeted agents have transformed pediatric ALL management, particularly for high-risk cases. While therapeutic innovations show promising efficacy and safety profiles, equitable access remains a critical challenge. Future research should address cost barriers and optimize implementation strategies to ensure global benefit.

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ALBUMIN SERUM LEVEL AND INTENSITY OF PRE-PHASE CYTOREDUCTIVE THERAPY ARE MODULATORS OF EARLY MORTALITY IN ADULT ACUTE LYMPHOBLASTIC LEUKEMIA

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Introduction: Acute lymphoblastic leukemia (ALL) in adults has a substantial mortality within 30 days of diagnosis, defined as early mortality (EM). EM in ALL demonstrates relevant disparities between low-middle income countries (LMICs) and high-income, with reported rates of 10-25% versus <5%, respectively. This mortality gap persists due to multiple factors, exemplified by intensity of induction protocol, social disparities and others, but the precise contributors to elevated EM in LMICs remain poorly defined. **Objetivos:** Identify independent risk factors for EM in adult ALL patients in a high-complexity cancer treatment center in São Paulo, with focus on pre-therapeutic biomarkers and treatment intensity. **Material and methods:** Retrospective cohort study (2009 −2023) including adult patients (≥ 15 years) with newly diagnosed ALL or ambiguous lineage leukemia. Pre-phase regimens varied between corticosteroid alone and corticosteroid plus cyclophosphamide. Data were analyzed using Kaplan-Meier survival estimates and competing-risk methods for 60-day outcomes. Univariate and multivariable logistic regression identified EM risk factors; variables with $p < 0.2$ in univariate analysis or clinical relevance were included in the multivariable model, selected by lowest Akaike Information Criterion. A two-sided $p < 0.05$ denoted significance. **Results:** Of 203 patients (median age 36 years; 54.2% male; 76% B-cell phenotype; 34% Philadelphia chromosome−positive), 89.8% underwent corticosteroid-only pre-phase (prednisone 49.7%, dexamethasone 16.4%, methylprednisolone 1.6%), and 32.2% received cyclophosphamide + dexamethasone. The overall EM rate was 9.8% (95%CI:6.3-15.0). In univariate analysis, low