

Haematological and cytomorphological study of acute lymphoblastic leukemia (ALL)

Abstract

Objective: Acute lymphoblastic leukaemia (ALL) has long been recognized to be clinically and morphologically heterogeneous. We tried to study, analyze, and interpret the relationships between age, sex, clinical manifestations, FAB classification and hematological investigations. **Methods:** Over a period of 6 months, sixty-four, newly diagnosed (Sudan Black B-negative), cases had been included in this study, from different centers. Clinical study was conducted concentrating on the presence of fever, pallor, bleeding tendency, lymph node enlargement, spleen and liver enlargement, neurological and testicular manifestations, and the presence of mediastinal mass on chest x-rays. Hematological investigations included haemoglobin concentration, initial total white cell count, and platelets count. Bone marrow smears were stained with MGG stain and the FAB classification and the FAB scoring system had been used. **Results:** The study showed that children were 39 (61%) of total cases while adults were 25 (39%), with the highest age incidence between 0-5 years. Male: female ratio was 2:1. Age incidence in males was higher than that for females for all age groups. Lymph node enlargement and hepatomegaly were the most common clinical findings. The presence of mediastinal mass on chest x-ray was more in male than female sex (39.5% Vs 9.5%). L2-morphological subtype was more common in both children and

adults 87.2% and 92% respectively) than L1 morphological subtype (12.8% and 8% respectively). No L3 type had been found in our study. Conclusion: ALL is a disease of children mainly with higher incidence in males than females and, unlike the internationally reported cases where L1 type is more prevalent, L2 type is more prevalent in Iraqi cases.