Abstract

Acute Lymphoblastic Leukaemia (ALL) accounts for a significant proportion of the total childhood cancers in Sri Lanka. Nearly 75-80% of children with ALL can be cured in developed countries with proper scheduling of chemotherapy (CT), improvement in therapy and adequate supportive care.

The aims of this study were to describe some of the patient characteristics at presentation, some of them being prognostic indicators of ALL and to determine the ability of these children with ALL to complete each phase of the UKALL X protocol on the scheduled date.

The scheduling was considered crucial by the author as treatment is the most important prognostic factor and would depend on the supportive care needed to maintain the scheduling of CT. This would determine the long term survival of these patients with ALL.

A retrospective study was performed. Patients were identified from their medical records over a period of three years. Patient characteristics and scheduling of the UKALLX protocol were determined from medical records and patient interviews. Remission after induction was confirmed by bone marrow biopsy (BMB) reports maintained at the Haematology department at the National Cancer Institute Maharagama (NCIM).

54 patients were identified. The overall sex ratio was 1.3 males to females while the world wide figures showed a sex ratio of 1.2 males to Females. The Male to Female ratio in the age group above 10 years old was 2.3 which was similar to the world wide figures. 50% of the study population was of the L1 sub type while 48.4% were of the L2 sub type and 1.85% was of the L3 sub type. This was in contrast to the world wide data which shows 85% as being L1 sub type, 14% being L2 sub type and 1% being L3 sub type.

Hepatosplenomegaly was seen in 54% of the study population, while it was about 66% in the international literature. A Mediastinal mass was seen in 3.7% of the study population.

18.5% of the study population presented with a leucocyte count of more than 50,000, which were similar to international literature. 57.4% of the study population presented with a leucocyte count of less than 10,000, which was similar

to international literature.24% of the patients presented with leucocyte counts between 10,000 and 49,000, while the international literature showed 30% in the same category. There were more patients in the L2 sub type who presented with leucocyte counts of less than 4000 and over 50,000 than of the L1 sub type.

55% of the study population presented with platelet counts less than 20,000 while it accounted for 28% in the international literature.44% of the study population had platelet counts of more than 20,000 which were nearly similar to the international literature figures of 47%.There were more patients in the L2 sub type who had platelet counts of less than 20,000 than in the L1 sub type.

48% of the study population presented with Haemoglobin (Hb) levels of 7 g/dl which was nearly similar to international literature figures of 43% while, 42% and 10% of the study population respectively presented with Hb levels of 7-11 g/dl and more than 10 g/dl which was similar to international literature figures.

The death rate during induction was 1.8% in the study group while in the United Kingdom it was 1%. The death rate during intensification was 3.7% in the study group, while in the United Kingdom, it was 2%.

85% of the study population completed induction on the due date.
65% of the L1 sub type commenced intensification on the due date while only 50% of the L2 sub type commenced intensification on the due date.

96.2% of the patients achieved bone marrow remission in this study group which was similar to the international literature values of 95%.

33 patients in the study group received 2400 cGy in 15 fractions as prophylactic cranial radiotherapy, while 17 patients received 1800 cGy in 10 fractions as prophylactic cranial radiotherapy.

63% of the patients in the study group commenced maintenance on the due date.
5% of the study group had overt evidence of central nervous system disease which was much higher than the figures in the international literature which was 1.2%

All patients with ALL need not be treated with single treatment regimes and optimum management of these patients with ALL need excellent supportive care in addition to sophisticated methods of investigations to determine specific risk groups.