

2. Title

Complete remission rate achieved by newly diagnosed adult acute myeloid leukaemia patients after induction chemotherapy, treated at National Cancer Institute, Maharagama.

3. Abstract

Acute myeloid leukaemia (AML) is the commonest form of acute leukemia among adults. Treatment of AML has been divided into remission induction chemotherapy and post-remission consolidation therapy. Achieving a complete remission is the most important step in controlling the disease.

The aim of this study was to describe the complete morphological remission rate (CR) achieved at the end of induction chemotherapy by newly diagnosed adult AML patients, treated at National Cancer Institute, Maharagama (NCIM). The study carried out prospectively and analysed the data of 75 consecutive newly diagnosed AML patients treated at NCIM.

Of 75 patients enrolled, 62.7% (n=47) were treated radically using upfront intensive chemotherapy, whereas 29.3% (n=22) and 8% (n=6) were treated with palliative chemotherapy regimens and best supportive care respectively. The combination of daunorubicin and cytarabine (DA) was used unvaryingly as the radical chemotherapy regimen. Out of 47 patients treated radically, 48.9% (n=23) achieved a CR at the end of remission induction chemotherapy. Thirteen (27.7%) patients died during induction period and the commonest cause of death was sepsis which accounted for more than 90% of induction deaths. Six (12.8%) patients had residual disease and 5 (10.6%) patients had primary refractory disease at the end of induction chemotherapy.

This study identified that the CR rate of newly diagnosed AML patients who received radical induction chemotherapy at NCIM (48.9%) was inferior to the world standards (70%). However, the proportion of patients who received standard induction chemotherapy but didn't achieve a CR at the end of induction was very much in the range of international standards (23.4%). Hence, the main reason for the inferior CR rate was the higher rate of mortality (27.7%) during induction period compared to the world figures (less than 5%).

Therefore, this study recommends, identifying possible causes leading to increased rate of infection related mortality during induction chemotherapy period and taking prompt remedial measures as the most important step to improve CR rate of newly diagnosed patients with AML treated at NCIM.