

Prognosis of acute myeloid leukemia in the general population: data from southern Switzerland

Erika Lerch¹, Vittoria Espeli¹, Emanuele Zucca¹, Leda Leoncini¹, Giancarlo Scali², Oreste Mora¹, Andrea Bordoni³, Franco Cavalli¹, and Michele Ghielmini¹

¹Istituto Oncologico della Svizzera Italiana (IOSI), Bellinzona; ²Centro Trasfusionale CRS, Lugano; ³Registro dei Tumori del Canton Ticino, Locarno, Switzerland

ABSTRACT

Aims and background. To evaluate the outcome of adult patients with *de novo* acute myeloid leukemia in the Italian-speaking part of Switzerland and to identify prognostic factors, time to progression and overall survival.

Methods and study design. Data of all adult patients diagnosed with acute myeloid leukemia from January 1984 to December 2003 were collected retrospectively. Univariate and multivariate analysis for time to progression and overall survival were performed.

Results. The incidence of acute myeloid leukemia in the adult population in southern Switzerland is 2.6/100,000 per year. Complete clinical and pathological data and follow-up information were available for 128 patients. The median age was 67 years (range, 18 to 94). The median follow-up was 97 months. Median overall survival was 6 months, with a 2-year overall survival of 16%. Median time to progression was 3 months. Thirty-five patients (median age, 80 years) were given best supportive care and/or palliative chemotherapy. The median survival in this subset was 2 months. Of the 93 patients treated with a curative intent, 48 were older than 60 years. The complete remission rate after induction chemotherapy was 80% for patients younger than 60 years and 31% for those older than 60 years ($P < 0.0001$). Overall survival at 2 years was 40% and 12%, respectively ($P < 0.0005$). The relapse rate was 61%, and only 28% of the patients who were given reinduction chemotherapy reached a second complete remission. Of the patients treated with curative intent, 52% were treated in a clinical trial. Their median age was significantly lower than those not included in a trial: 57 vs 66 years ($P < 0.0001$). Patients treated in a trial had a significantly better prognosis than those not so treated (median survival, 12 vs 6 months). Patients treated with high-dose cytarabine as first-line therapy (given to 25 of 93 patients treated with a curative intent) had a better survival than those given standard cytarabine doses ($P < 0.0005$). The outcome of the patients treated after 1993 was significantly better ($P = 0.026$) than that of the previously treated cohort. In multivariate analysis (not including cytogenetic data), only age ($P = 0.005$), performance status > 1 ($P = 0.001$) and treatment given before/after 1993 ($P = 0.044$) were found to be independent prognostic factors for both overall survival and time to progression.

Conclusions. Most patients with acute myeloid leukemia are older than 60 years, and their outcome is still disappointing. For younger patients, the prognosis is better if they receive high-dose cytarabine as post-remission therapy and if they are treated in the setting of a clinical trial.

Introduction

Acute myeloid leukemia (AML) is a relatively rare malignant haematologic disease that affects mainly elderly people. According to a recent survey from the US National

Key words: acute myeloid leukemia, population-based, prognosis.

Correspondence to: Erika Lerch, Istituto Oncologico della Svizzera Italiana, Ospedale Regionale Bellinzona e Valli, 6500 Bellinzona, Switzerland.
Tel 0041-91-8118183;
fax 0041-91-8118038;
e-mail Erika.Lerch@eoc.ch

Received June 10, 2008;
accepted January 12, 2009.