

Report of chronic myeloid leukemia in chronic phase from Eastern India, Institute of Hematology and Transfusion Medicine, Kolkata, 2001-2009

Siddhartha Sankar Ray,
Prantar Chakraborty,
Utpal Chaudhuri,
Ganesh

Department of Hematology, Institute of Haematology and Transfusion Medicine, Medical College, Kolkata, West Bengal, India

Address for correspondence:

Dr. Siddhartha Sankar Ray,
Department of Hematology,
Institute of Haematology
and Transfusion Medicine,
Medical College, Kolkata,
West Bengal, India.
E-mail: siddharthasankarray@
gmail.com

ABSTRACT

The data 192 patients from Eastern India, Kolkata center was presented in Indian cooperative oncology network meeting, out of which 97% patients were diagnosed in the chronic phase. Complete hematological response was seen in 70.5% among patients and 86% of patients were in clinical and hematological remission over 5 years with a median follow-up of 4.85 years.

Key words: *Chronic myeloid leukemia, chronic phase, Institute of Hematology and Transfusion Medicine*

INTRODUCTION

The availability of imatinib has revolutionized the treatment of chronic myeloid leukemia (CML). It has changed the scenario by improving the survival and quality-of-life of patients.^[1,2] However, in spite of unprecedented success of imatinib, it is of common observation in daily practice to see patients losing imatinib effect and start developing imatinib resistance. It is important to understand the reasons of imatinib failure and to follow the strategy to combat this problem.^[3]

As there is no published data on CML patients from eastern India we are trying to find out whether there is any difference in our with respect to demographic details, treatment received, response to treatment and adverse effects.

PATIENTS AND METHODS

It is a retrospective analysis of data of our 192 CML patients. We have approximately 600 patients registered at our CML clinic. We started maintaining records since 2001 although the first patient has been following with us since 1984. We have analyzed data of 192 patients for this study It includes 118 consecutive patients from Post-imatinib era and 74 consecutive patients from Pre-imatinib era. This is to exclude any selection bias.

RESULTS

The Median age at presentation was 38 years (range 4 years to 74 years). Approximately one-fifth presented before 25 years of age. Nearly, 70% of our patients were male. Most common presenting symptom was abdominal swelling and abdominal pain, followed by abdominal swelling with fatigue, abdominal swelling with fever, weight loss etc. Most common presenting sign was hepatosplenomegaly, seen in 71% of our patients. 5.4% of our patients did not have any organomegaly.

RESPONSE

Cytogenetic study was carried out in 94.3% of patients and in 10.4% fluorescence *in situ* hybridization study

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was performed as there was no dividing cell in cytogenetic study. Additional cytogenetic abnormality was seen in 2.2% patients which were t(3:14); inv 4; del 14, del 2,-3, mar; t(5:22) 97% of our patients presented in chronic phase. 81% of our patients are on imatinib, half of them are getting Glivec from GIPAP trial from other centers as our center was not supported by GIPAP.

Complete hematological response (CHR) was achieved in 58.3% of our patients. CHR rate was 70.5% of patients on imatinib and 21% of patients on hydroxyurea only. We compared the response in patients started treatment in the pre-imatinib era with those patients who started treatment in imatinib era. In the pre-imatinib era 44.6% achieved clinical remission with hydroxyurea and 39.2% achieved CHR while in post-imatinib era 86% maintained clinical and hematological remission over 5 years with a median survival of 4.85 years.

Cytogenetic response was checked in 22 patients, CCyR was achieved in 18.4%, MaCyR in 63.7%, MiCyR in 13.3%. Molecular response was checked in five patients and MMR was achieved in two patients.

Imatinib dose was increased in 26.4%. In 44.4% the reason to increase dose was suboptimal response, in 22.2% it was due to loss of response and in 15% it was due to progression of chronic phase to accelerated or blast phase. Imatinib failure rate was 31.2%. Two patients developed tuberculosis and was started on antitubercular drug. One patient lost response to imatinib and other progressed to accelerated phase.

Toxicity

Most common side-effect of imatinib was hypopigmentation, which is seen in all patients receiving imatinib. Around, 21% of patients suffered from various side-effects of imatinib. seen in The most common side-effect was muscle cramps seen in 32.3%, while 11.7% had oral ulcer, 11.6% had skin rash, 5.6% had gastrointestinal upset, 5.6% had joint pain and 2.9% had pleural effusion.

Imatinib needed to be withheld in 22% due to intolerance to side-effects and thrombocytopenia was the cause in one-third of them. One patient conceived and switched to hydroxyurea as she could not afford other modality of treatment.

We did not find any association of outcome with presenting total leukocyte count/TLC, blast or platelet count. Repeated interruption of imatinib was associated with worse outcome. Possibly concurrent administration of antitubercular drug is related to imatinib failure.

DISCUSSION

Median age of presentation is one decade earlier in our population, with one-fifth of our patients presented below 25 years of age. Hepatosplenomegaly was presenting feature in 71%. Nearly, 81% patients were on imatinib. Nearly 70.5% of patients on imatinib achieved CHR. 44.6% achieved clinical remission with hydroxyurea and 39.2% achieved CHR. May be it is too early to write the death sentence of hydroxyurea in the management of CML in poor patients. There was no association with presenting TLC, blast or platelet count with the response to imatinib. However, recurrent interruption of imatinib and co-administration of anti-tubercular drug was associated with imatinib failure.

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