EHA18ABSSUB-4334

EARLY AND DEEP RESPONSES TO IMATINIB PREDICT NOT ONLY COMPLETE MOLECULAR RESPONSE BUT ALSO THE PROBABILITY FOR MAINTAINING THE RESPONSE.

Garcia-Gutierrez Valentin [1,*], Begoña Maestro [2], Felipe Casado [3], Manuel Perez-Encinas [4], Isabel Massague [5], Raquel De Paz [6], Santiago Osorio [7], Joaquin Martinez [8], Guiomar Bautista [9], Pilar Giraldo [10], Carmen Burgaleta [11], Maria Jesús Peñarrubia [12], María José Requena [13], Carmen Calle [14], Hernandez-Rivas Jose Angel [15], Cano Pilar [16], Juan-Luis Steegmann [17]

[1]Servicio de Hematología, Hospital Universitario Ramón y Cajal, [2]Servicio de Hematología, Registro Español de Investigación y Tratamiento de Leucemia Mieloide Crónica (RELMC), Madrid, [3]Servicio de Hematología, Hospital Virgen de la Salud, Toledo, [4]Servicio de Hematología, , Hospital Clinico U. de Santiago de Compostela, Santiago de Compostela, [5]Servicio de Hematología, Hospital Valle de Hebron, Barcelona, [6]Servicio de Hematología, Hospital Universitario La Paz, [7]Servicio de Hematología, Hospital Universitario Gregorio Marañon, [8]Servicio de Hematología, Hospital Universitario Doce de Octubre, [9]Hospital Unviersitario Puerta de Hierro, Madrid, [10]Servicio de Hematología, Hospial Universitario Miguel Servet, Zaragoza, [11]Servicio de Hematología, Hospital Universitario Principe de Asturias, Madrid, [12]Servicio de Hematología, Hospital Clínico Universitario de Valladolid, Valladolid, [13]Servicio de Hematología, Hospital Universitario Severo Ochoa, Leganés, Madrid, [14]Servicio de Hematología, , Hospital General de Ciudad Real, Ciudad Real, [15]Servicio de Hematología, Hospital infanta leono, Madrid, [16]Servicio de Hematología, , Hospital La Mancha Centro, Ciudad Real, [17]Servicio de Hematología, , Hospital Universitario de la Princesa, Madrid, Spain

Poster Presentation

Background: Tyrosine kinase inhibitors (TKIs) have consistently proven a survival benefit in patients with chronic myeloid leukemia (CML). TKIs need to be taken for unlimited period of time in order to avoid the risk of relapse or transformation. It has been recently described how patients with a stable and complete molecular response (CMR), could safely quit treatment. Less is known about the real rates of patients under TKI to achieve CMR and which factors may play an important role maintaining the response.

Aims: To describe the percentage of patients who achieve a sustained complete molecular response and to identify factors associated with achieving this response.

Methods: We have analyzed retrospectively 578 patients treated with imatinib as first TKI in the Spanish RELMC registry. All patients were treated out of clinical trials. Follow up and treatment decisions were decided by hematologists according to their clinical judgment. Complete molecular response was defined as undetectable BCR-ABL transcript. Samples were not centralized but all PCR were done in the same laboratory for each patient during follow up.

Results: Out of the 578 patients analyzed, 124 patients (21%) had received interferon prior to imatinib. Sokal risk distribution was 42%, 47% and 11% for low, intermediate and high, respectively. 24% of the patients were treated with second generation TKIs (2GTKIs) (nilotinib or dasatinib) due to intolerance or inadequate response to imatinib. With a follow up of 85.59 months (8.93–130), the cumulative incidence of

CMR for patients treated only with imatinib was 51%. Median time to CCR was 31 months. Probabilities for achieving CMR were higher for low and intermediate Sokal risk patients (58% vs 51% vs 14% for low, intermediate and high risk patients respectively (p=0.2).The cytogenetic response at 6 months was a strong predictor for CMR: 59% vs 36% for patients with and without complete cytogenetic responses (CCyR) at 6 months (p=0.01). Once patients achieved CMR, the probability to maintain the response while on imatinib was 45% (23% of the entire cohort achieved and maintained CMR). Again, early response, defined as CCyR at 6 months, was a predictor factor for maintaining CMR: 68% vs 41% (p=.00). We found no association between probabilities of maintaining CMR and other prognostic factors such as Sokal risk index or previous interferon treatment. The probability to obtain CMR among patients who were changed to 2GTKIs was 25%, and this response was related to the indication for treatment changed: 50% vs 35% vs 19% (p=0.1) for intolerance, suboptimal response and treatment failure respectively. Among patients who achieved RMC after treatment changed, the probability for maintaining this response during follow up was 53%.

Summary / Conclusion: Our results show that complete and maintained molecular responses in patients treated with imatinib occurred in one fifth of the patients. The use of new treatments that enhance the rate of early responses could improve the number of patients candidate for discontinuation treatment clinical trials.

Keywords: None