

THE ROLE OF CLINICAL PHARMACIST IN ADHERENCE TO IMATINIB TREATMENT

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1. Introduction

Since the introduction of BCR::ABL1 tyrosine kinase inhibitors (TKIs) in 2000, the treatment of chronic myeloid leukemia (CML) has improved significantly.(1) Imatinib is a small molecule protein-tyrosine kinase inhibitor that potently inhibits the activity of the BCR-ABL1 tyrosine kinase. The recommended dose is 400 mg/day, once daily in chronic phase, and should be administered orally with a meal and a large glass of water to minimise the risk of gastrointestinal irritations.(2) The aim of the study is to show patient adherence to imatinib and the role of the clinical pharmacist.

2. Material and method

The observational, longitudinal, and prospective study was conducted on 34 CML patients at the PHI University Clinic of Hematology-Skopje (18 men,16 women). The study was conducted in the period from April to June 2024. All of them were treated with tablets Imatinib 400 mg. Medical records were systematically reviewed by the hospital pharmacy department. Anamnestic data about medication adherence, were taken from patients using a 10-Items questionnaire created by a clinical pharmacist.The 2 points which related to medication adherence were investigated in two time points, in April and June 2024.

3. Results and discussion

In the first point of the research (April 2024), the following data were obtained: 25 patients used the medicine after a meal, 5 patients on an empty stomach and only 4 patients took the medicine according to SmPC recommendation, in the middle of the meal **Fig1**. 7 patients frequently changed the part of the day when they used the medicine. 10 patients had nausea and vomiting after using the medicine, and 5 patients reported they had diarrhea.

All non-adherence to the therapy was detected through interviews conducted by the clinical pharmacist and were advised and educated on how to properly adhere to the recommended regimen. In the second point of the research (June 2024), 4 of 7 patients adhered to using the medicine at the recommended time (9% improvement), 18 of 30 patients reported using the medicine during a meal, as prescribed (35 % improvement), nausea and vomiting were decreased in 3 of 10 patients (20% improvement), and diarrhea decreased in 1 of 5 patients (12% improvement) **Fig2**.

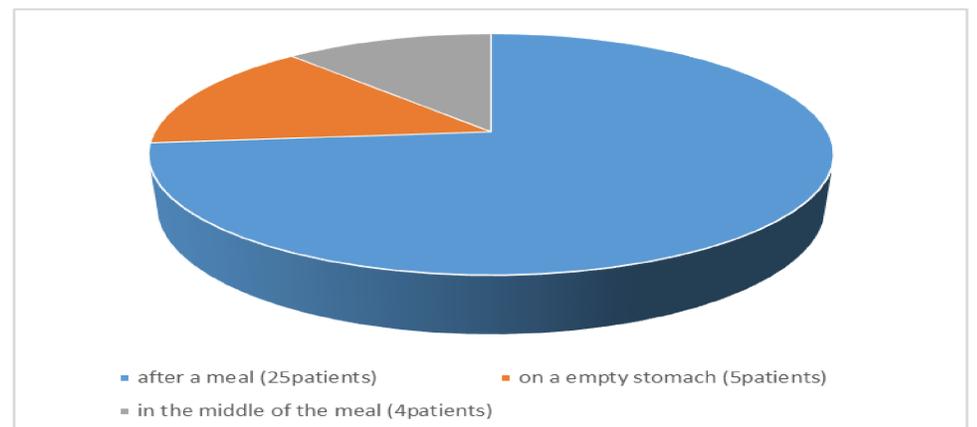


Fig1: Treatment of the drug with a meal

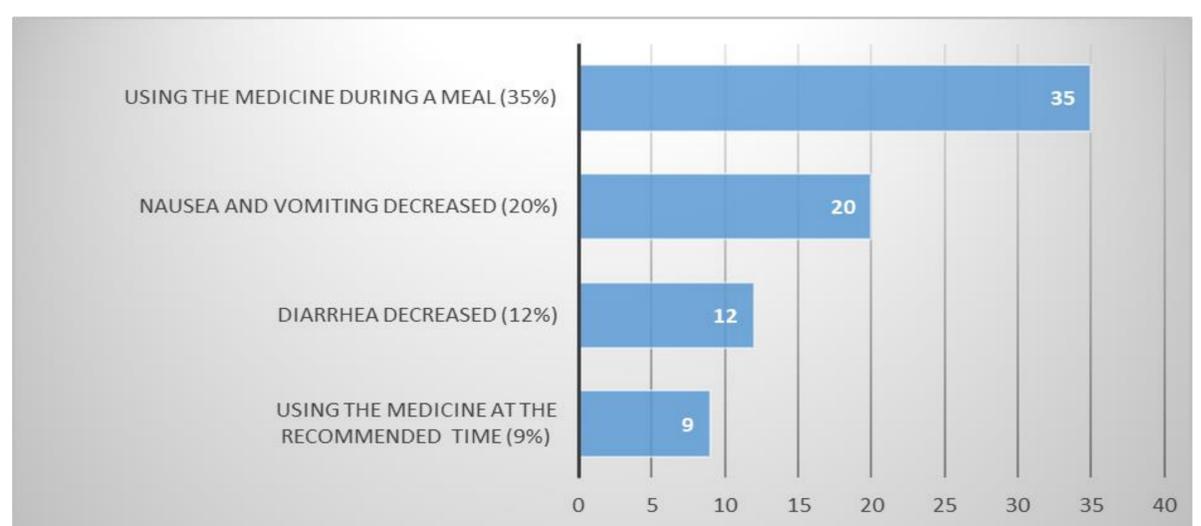


Fig2: Improvement in Imatinib treatment after clinical pharmacist intervention



Conclusion

The intervention of a clinical pharmacist is significant to obtain positive clinical results. To improve medication safety, medication and side-effect management should be performed, and adherence should be regularly checked and systematically encouraged. Open discussion between the clinical pharmacist and patient regarding barriers to adequate medication adherence and plays a key role in encouraging patients to adhere to the recommendations of the health care team. Interventions were associated with improved patients' adherence to their medications and reduction of gastrointestinal irritations in patients using Imatinib.