SOHO ANNUAL MEETING 2024

INCIDENCE AND TYPE OF SECOND PRIMARY MALIGNANCIES (SPMS) IN CHRONIC MYELOID LEUKEMIA PATIENTS

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INTRODUCTION

Tyrosine kinase inhibitors (TKIs) have significantly improved the prognosis of patients with CML, with the majority of patients in chronic phase (CP) achieving near normal life expectancy. As patients live longer on TKIs, they may be more vulnerable to developing SPMs, either as a consequence of TKI side effects or owing to genetic instability driven by an existing hematologic malignancy.

AIM

Data on the incidence of secondary malignancies is contradictory, so in this study, we evaluated the incidence and types of SPMs in CML-CP patients.

PATIENTS AND METHOD

This was a retrospective study conducted at the OCMU, Egypt between 2009 and 2021. Data from 390 patients with Philadelphia positive-CML-CP were analyzed; M:F ratio was 48%:52%. Median age at CML diagnosis was 44 years (range, 18-79). Median follow-up was 68.95 months (7.23-182.63). Patients who had a prior history of cancer or a concurrent diagnosis of other malignancies at CML diagnosis were excluded. Hydroxycarbamide was received by all patients until the results of Ph chromosome testing were complete. 1st line treatment was 1st G TKI (n=335) or 2nd G TKI (n=55). Monitoring response & subsequent TKI therapy was based on ELN guidelines.

RESULTS

Of the patients who developed SPMs (n=15, 3.84%), 11 were male (73.33%). Median age of these 15 patients at diagnosis of the SPM was 65 years (range, 35–75). Median time from diagnosis of CML to SPM was 47.65 months (range, 2.4-147.53). The types of SPMs were breast, laryngeal, and liver cancer (each, n=2), stomach, tongue, thyroid, and prostate cancer (each, n=1), chronic lymphocytic leukemia (n=2), non-Hodgkin lymphoma—diffuse large B-cell lymphoma, monoclonal B lymphocytosis, and multiple myeloma (each, n=1). At the time of SPM diagnosis, 9/15 patients were in major molecular response. Median OS for CML-CP patients with SPMs was 49.6 months (range,12.2-148.88), *vs* 69.27 months (range, 7.23-182.63) for those without. At the end of follow-up, 6/15 patients were alive, 4/15 patients had been lost to follow-up, and 5/15 patients had died.

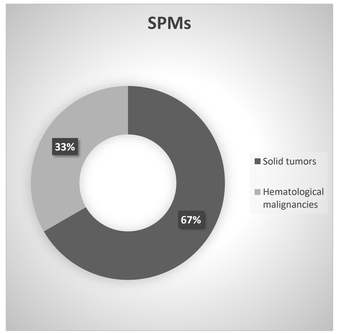


Figure 1: Incidence of SPMs in CML patients

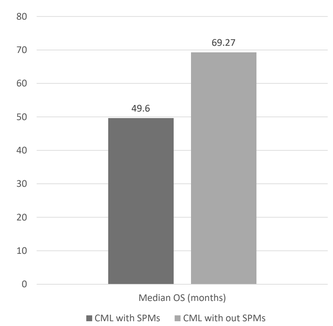


Figure 2: Median OS for CML patients with SPMs vs without

CONCLUSIONS

Our analysis of patients with TKI-treated CML revealed a higher incidence of solid *vs* hematological malignancies; and the outcome of these patients was dismal.

REFERENCES

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ACKNOWLEDGEMENTS

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