Comparison of the incidence of cardiovascular adverse events in patients with chronic myeloid leukaemia receiving tyrosine kinase inhibitors with representatives of the general population

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INTRODUCTION

Some tyrosine kinase inhibitors (TKI) used in chronic myeloid leukaemia (CML) treatment have cardiovascular toxicity, which may be a contraindication for their use in patients with cardiovascular (CV) risk factors.

In patients with CV risk factors or a history of CV disease, it is difficult to determine the contribution of TKI or premorbid background to their CV outcomes.

AIM

To compare the frequency and profile of cardiovascular outcomes in patients with CML receiving TKI with those in the general population with similar anthropometric parameters, CV risk factors, and history of CV disease.

METHOD

Patients with CML in the chronic phase (CML group) were compared with representatives of the general population included in the epidemiological study ESSE-RF (control group).

The groups were comparable in terms of (table 1):

- gender
- age (±5 years)
- body mass index (±3 kg/m²)
- history of CV disease or diabetes mellitus
- statin use

CONCLUSIONS

When comparing the group of CML patients with the control group, assuming comparable anthropometric characteristics and CV history, a significantly higher number of CVAE was observed in patients with CML.

RESULTS

CV outcomes were analyzed with a median follow-up of 80 months in the CML group and 72 months in the control group.

CML group

CV adverse events (CVAE) developed in 9 patients (8%): stable angina pectoris – 1, peripheral arterial atherosclerosis – 5, acute stroke – 3.

The median time from the start of TKI, on which CVAE developed, to CVAE was 45 months.

Control group

Myocardial infarction (MI) in 4 people (2%), stroke in 2 people (1%), while 1 person developed stroke and MI sequentially.

Median time to CVAE was 50.9 months.

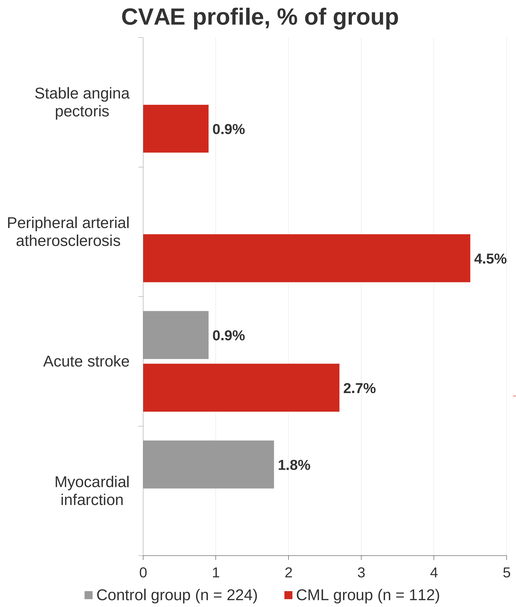
Patients with CVAE

CML group **9 / 112 (8%)**

Control group **5 / 224 (2%)**

Table 1. Characteristics of CML patients (CML group) and representetives of general population (control group)

Parameter	CML group (n = 112)	Control group (n = 224)
Women	61%	matched
Median age, years	49.5	49
LDL, mmol/L	2.58	3.46
Statin use, n (%)	22 (20%)	44 (20%)
Median follow-up, months	80	72
Patients with CVAE, n (%)	9 (8%)	5 (2%)*
Median time to CVAE, months	45	50.9



** Patients with any CVAE in the control group: 4 with MI and 2 with stroke, one of whom developed both events sequentially.*

CVAE – cardiovascular adverse events; LDL – low-density lipoprotein; MI – myocardial infarction; TKI – tyrosine kinase inhibitors.

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