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ANALYSIS OF CARDIOVASCULAR RISK ASSOCIATED WITH IRREVERSIBLE INHIBITOR OF BRUTON'S TYROSINE KINASE TREATMENT IN PATIENTS WITH CHRONIC LYMPHOID LEUKEMIA

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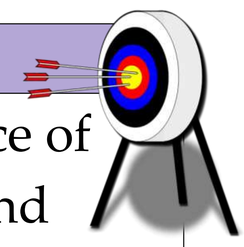
Background and importance

Side effects of inhibitors of Bruton's tyrosine kinase(BTK) include hypertension, arrhythmias and cardiac events. The cardiovascular risks associated with ibrutinib and acalabrutinib may vary depending on individual patient factors.

Aim and objectives



Outcome analysis of the occurrence of cardiovascular adverse events and cardiovascular risk in chronic lymphoid leukemia(CLL) patients on treatment with BTK.

Material and methods

Observational retrospective study
From January 2017 to May 2023

Cardiovascular risk at baseline was obtained with different calculators:

- **SCORE 2:** Healthy patients
- **SCORE 2-OP:** Over 70 years of age
- **ADVANCE:** diabetics
- **SMART:** previous cardiovascular disease c

Statistical analysis: R commander

Clinical variables	
Sex	Age
Smoking	Obesity
Eastern Cooperative Oncology Group (ECOG) scale	TP53 mutation
Treatment	Date of diagnosis
Duration of treatment	Adverse effects
Dose modifications	

Results

56 patients with BTK treatment were included.

Median age	73(IQR 66-79).	
Sex	55.3% male	
TP53 mutation +	51.7%	
Median year of diagnosis	2014(IQR 2010-2018)	
Obesity	30.3%	
Smokers	21.4%	
Median 10-year risk of cardiovascular events	8.3%(IQR 4-11)	
Comorbidities at the start of treatment	arterial hypertension	53.5%
	dyslipemia	26.7%
	Ischemic heart disease	16%
	Atrial fibrillation	5.3%
	Pulmonary embolism	3.5%
Treatment	• 49 patients with ibrutinib (26.5% first line) • 7 patients with acalabrutinib (85.7% first line). • 23.2% reduced the dose • 42% discontinued treatment (25% remained in therapeutic abstinence)	
Median treatment duration	30 months(IQR 12-46).	
Adverse events	• 24% developed some cardiovascular pathology during the course of treatment (14.2% developed major adverse cardiovascular events (MACE) with hospitalization) • 28.5% died (2 patients due to MACE and 1 due to CLL progression).	
Median year of treatment at which MACE developed	second year (IQR 1-3).	

Statistically significant differences were found between the occurrence of MACE and sex (p=0.04), duration of treatment (p=0.02) and hypertension before starting BTK (p=0.009).

Conclusions and relevance

The occurrence of MACE occurs in a modest number of patients with a low associated mortality. A statistically significant association was found with sex, duration of treatment and hypertension at the start of BTK.