IMPACT OF ATRIAL FIBRILLATION IN ONCO-HEMATOLOGICAL PATIENTS IN EUROPE: A TARGETED LITERATURE REVIEW.

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Introduction: Atrial fibrillation (AF) is a common complication in patients with active cancer and their treatment poses a major challenge. Despite the advantages of using Bruton Tyrosine Kinase inhibitors (BTKi) in hemato-oncology disease management, the added risk of certain adverse events such as AF should not be neglected. The objective was to determine the clinical and economic burden of AF in onco-hematological patients in Europe.

Methods: Electronic databases (Pubmed, Science Direct, MEDES, IBECS, eSalud) and congress abstracts were searched to identify studies published between January 2010 and January 2022. Observational, retrospective studies, case studies and reviews of AF on epidemiology, healthcare costs, management of complications, patient journey, quality of life, risk factors and treatment patterns in patients with onco-hematologic diseases in Europe were included.

Results: From 929 articles identified only 31 studies fulfilled eligibility criteria (23 on epidemiology, 16 on treatment patterns, 8 on risk factors and 4 on management of complications). The incidence of AF during onco-hematological treatment varies from 2% to 16%, and has been seen to increase with the use of first-generation BTKi (up to 23%). Swarup et al. and Caldeira et al. showed that first-generation BTKi increased significantly the risk of AF compared to chemo-immunotherapy (5.4 times) and chemo- or immunotherapy alone (4.7 times). In patients with chronic lymphocytic leukemia, this risk was 15 times higher than non-treated patients. Other risk factors include older age, male gender and comorbidities (history of cardiovascular disease or AF, diabetes mellitus, respiratory problems, hyperlipidemia, thrombocytopenia). The management of AF-related complications is based on anticoagulant and/or antiarrhythmic therapy, and regular monitoring to control the rhythm and cardiac frequency. The CHA_2DS_2-VASc score and the time from diagnosis determine the need for anticoagulants. Direct oral anticoagulants (e.g., edoxaban, apixaban and rivaroxaban) are preferred over vitamin K antagonists and low-molecular-weight-heparin. Beta-blockers are recommended in patients with heart failure or at risk of ventricular dysfunction. When AF or other cardiologic events are no longer controllable, the patient's dose should be reduced or treatment should be withdrawn. No data on healthcare costs, quality of life and patient pathway were identified.

Conclusions: Our findings suggest that there is scarce and heterogeneous information about AF in onco-hematological patients in Europe. Available evidence reports a high risk of developing AF associated with first-generation BTKi and comorbidities. Further studies are needed to help understand the clinical and economic burden of AF in onco-hematological patients in the European countries.