Major cardiovascular events in patients with atrial fibrillation and active lung cancer: data from the CANAC-FA registry, a multicentre, retrospective, observational study

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Background: “Real world” observational data on cardiovascular prognosis of patients with atrial fibrillation and active lung cancer are very limited.

Purpose: Our aim was to describe the incidence of major cardiovascular events in this population.

Methods: We used data from CANAC-FA Registry (Active Cancer and Atrial Fibrillation, in Spanish, CÁNcer ACtivo y Fibrilación Auricular), an observational, multicentre, retrospective study. The medical records of all subjects attended at the outpatient oncology clinics solely or mainly attending lung cancer patients from January 1st, 2017 to December 31st, 2019 in five tertiary university hospitals in the south of Spain were reviewed. The first visit to the oncology clinic with atrial fibrillation diagnosis (previous or at that moment), during the first year after the lung cancer diagnosis was considered the basal visit. Follow up period ended at December 31st, 2021. End points were stroke/systemic embolism, thrombotic events (stroke, systemic embolism, pulmonary embolism, deep vein thrombosis), major bleeding (International Society of Thrombosis and Haemostasis definition), and cardiovascular events (hospital admission for cardiovascular reasons or cardiovascular death). Death without the event of interest was considered a competing risk. Calculations were performed with R statistical software, cmprsk package.

Results: Among 6984 patients, 269 presented active lung cancer and atrial fibrillation (3.7%). Mean age was 71±8 years, and 91% were male. Cardiovascular risk factors were: hypertension 77%, dyslipidemia 49%, diabetes 37% and active smoking 30% (62% ex-smokers). Charlson, CHA2DS2VASc and HAS-BLED indexes were 6.7±2.9, 2.9±1.5 y 2.5±1.2, respectively. Tumor stage was I, II, III and IV in 11%, 11%, 34% and 45% of the study sample, respectively. Anticoagulants were prescribed to 84% of the patients: direct anticoagulants (44%), low molecular weight heparins (30%) and vitamin K antagonists (26%). After up to 46 months of maximum follow-up, 7 patients presented a stroke/systemic embolism, 18 had a thrombotic event, 16 presented a major bleeding, 33 had a cardiovascular event and 186 died. Cumulative incidences of major events at one, two and three years of follow-up were 2.4±1.0%, 3.3±1.3% and 3.3±1.3% for stroke/systemic embolism; 4.7±1.3%, 8.0±2.1% and 8.9±2.2% for thrombotic events; 2.7±1.0%, 6.7±1.9% and 9.9±2.6% for severe bleeding, and 9.5±1.8%, 13.4±2.5% and 15.9±3.0% for cardiovascular events (figure).

Conclusions: Cumulative incidence of cardiovascular events was 15.9% at three years in this “real world” population of patients with active lung cancer and atrial fibrillation. These data could suggest an unmet need for more effective preventive strategies in this population.
Major events:

- Stroke/Systemic embolism
- Thrombotic event
- Severe bleeding
- Cardiovascular event