

Retrospective Study on the Prognosis of Patients with New-Onset Atrial Fibrillation to Evaluate the Risk of Developing Occult Cancer in Absence of Concurrent Chronic Inflammatory Disease

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Abstract : Background: Cancer favors both the pro-inflammatory state and autonomic dysfunction, two important mechanisms in the genesis of AF. Atrial remodeling might be caused as a result of paraneoplastic conditions or the result of direct expression of neoplasia. Here, we hypothesize that cancer, through inflammatory mediators, may favor the appearance of AF and patients with the first episode of AF could have a higher risk of developing cancer. Method: Data was collected from patients who attended the emergency department of our hospital for the first episode of AF, diagnosed electrocardiographically, between 2010-2015 (n = 712). The minimum follow-up was 2 years, recording the appearance of cancer, total mortality, recurrences of AF and other events. Patients who developed cancer and those who did not during the 2 years after the onset of AF were compared, as well as with the incidence of cancer in Spain in 2012. Results: After 2 years, 35 patients (4.91%) were diagnosed with cancer, with an annual incidence of 2.45%. Hematological neoplasms were the most frequent (34.28%). The cancer group was older (76.68 +/-12.75 years vs 74.16 +/-12.71; p <0.05) and had fewer typical symptoms (palpitations) (33.38% vs 14.28% , p <0.05). The incidence of cancer in Spain during 2012 was 0.46%, much lower than our sample. When comparing the incidence by age, these differences were maintained both in those over 65 years of age and in those under 65 years of age (2.17% vs. 0.28%; 0.28% vs. 0.18% respectively). Discussion: Therefore, a high incidence of cancer in patients with the first episode of AF was observed (the annual incidence of 2.45% after the onset of AF is 6.1 times that of the general population). After the evaluation of patients with AF in their first detected episode, surveillance of the appearance of cancer should be considered in clinical practice.

Keywords : cancer, cardiovascular outcomes, atrial fibrillation, inflammation

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