Patterns of anticoagulation for atrial fibrillation in cancer patients referred for cardio-oncological evaluation

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Funding Acknowledgement: Type of funding source: None

Background: Direct oral anticoagulants (DOAC) are the standard of care for the prophylaxis of non-valvular atrial fibrillation (NVAF)-cardioembolism, but their use in oncological patients has been limited so far.

Methods: We retrospectively reviewed the records of the patients referred to two cardio-oncology outpatient units between January 2017 and July 2019, and selected those presenting with NVAF, CHA2DS2-VASc ≥1 for men and ≥2 for women, and cancer on active treatment. The following were considered as contraindications to DOAC: severe chronic kidney disease; anti-neoplastic therapy unknown or with potential moderate-to-severe adverse interactions; cirrhosis or liver metastases. Clinical characteristics of patients on DOAC (group 1), on VKA or LMWH with at least 1 contraindication to DOAC (group 2), and on VKA or LMWH despite not having contraindications to DOAC (group 3) were compared by chi-square or ANOVA.

Results: Of a total of 3,831 patients, 264 (6.9%) met the inclusion criteria (Figure 1). One-hundred fourteen (43.2%) were in group 1, 61 (23.1%) in group 2 (18 on VKA, 43 on LMWH), and 65 (24.6%) in group 3 (27 on VKA, 38 on LMWH). Anticoagulation was omitted in 24 (9.1%) cases for various reasons: spontaneous bleeding (5), anaemia and/or thrombocytopenia (5), frailty (4), CHA2DS2-VASc 1 (3), pharmacological interactions (1), single episode of NVAF (1); and not clearly motivated in 5 subjects.

The only significant difference between the 3 groups was serum creatinine concentration (Table 1). Of note, only 10% of subjects in group 1 received an inappropriate DOAC dose, while LMWH was under-dosed for 18% of patients in group 2 and 31% of patients in group 3 (P=0.002).

Conclusions: In the setting of a dedicated cardio-oncology consultation, DOAC and VKA are most often appropriately prescribed to cancer patients with NVAF. However, there is residual use of LMWH, not infrequently at non-anticoagulant dosage. This is a non-evidence based common practice in clinical oncology that clearly must be abandoned

Table 1. Principal baseline characteristics

	Group 1 (N=114)	Group 2 (N=62)	Group 3 (N=65)	P
Age, years	75±8	74±8	74±7	0.35
Males	67 (59)	44 (72)	44 (68)	0.18
Advanced cancer	64 (56)	36 (59)	30 (46)	0.17
CHA2DS2-VASc	3.59±1.28	3.26±1.26	3.37±1.22	0.23
HAS-BLED	1.67±0.84	1.64±0.78	1.88±0.82	0.18
Haemoglobin, g/dL	12.35±1.85	12.03±1.94	12.16±1.90	0.57
Serum creatinine, mg/dL	1.03±0.35	1.33±0.81	1.03±0.24	<0.001

Values are mean ± SD or N (%).

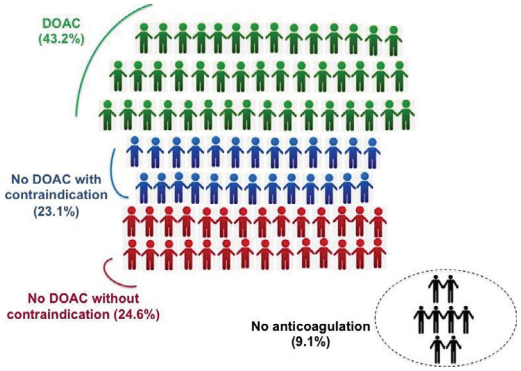

Figure 1