Impact of antithrombotic therapy in the prognosis of atrial fibrillation patients with advanced chronic kidney disease

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Introduction: Chronic kidney disease (CKD) is associated with an elevated thromboembolic and bleeding risk in atrial fibrillation (AF) patients, so the decision of antithrombotic therapy is a challenge.

Purpose: To analyze mortality, embolic and bleeding events in patients with advanced CKD and AF.

Methods: Multicentric retrospective registry on patients with AF and advanced CKD (CKD-EPI $<$30 mL/min/1.73 m^2). For death, multivariable Cox regression analysis was developed. For embolic and bleeding events, competing-risks regression based on Fine and Gray's proportional subhazards model was performed, being death the competing event

Results: We analysed 405 patients with advanced CKD and newly diagnosed AF. 57 patients were not treated with antithrombotic therapy (14.1%), 80 only with antiplatelet/s (19.8%), 211 only with anticoagulation (52.1%), and 57 with anticoagulant plus antiplatelet/s (14.1%). During a follow-up of 4.6±2.5 years, 205 died (50.6%), 34 had embolic events (8.4%) and 85 had bleeding outcomes (21.0%). Bleeding event rate was significantly lower in patients without antithrombotic therapy (Figure). After multivariate analysis, anticoagulant treatment was associated with higher bleeding rates, without differences in mortality or embolic events (Table).

Conclusion: Anticoagulation therapy was associated with a significant increase in bleeding events in patients with advanced CKD and newly diagnosed AF. None of the antithrombotic therapy regimens resulted in lower embolic events rate neither benefit in mortality.

Event	Therapy	HR	95% CI	p
Mortality	No antithrombotic therapy	ref	ref	ref
	Only antiplatelet therapy	1.52	0.89–2.58	0.125
	Only anticoagulant therapy	1.19	0.76–1.86	0.460
	Anticoagulant plus antiplatelet therapy	1.44	0.80–2.61	0.228
Embolic events	No antithrombotic therapy	ref	ref	ref
	Only antiplatelet therapy	1.13	0.36–3.53	0.832
	Only anticoagulant therapy	0.62	0.21–1.79	0.376
	Anticoagulant plus antiplatelet therapy	0.57	0.12–2.67	0.475
Bleeding events	No antithrombotic therapy	ref	ref	ref
	Only antiplatelet therapy	2.78	0.89–8.69	0.078
	Only anticoagulant therapy	3.13	1.11–8.81	0.030
	Anticoagulant plus antiplatelet therapy	4.39	1.38–13.93	0.012

*Adjusted by age, sex, chronic kidney disease stage (4 or 5), CHA2DS2-VASC and HASBLED scores.