Treatment of atrial fibrillation in 2019

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Atrial fibrillation (AF) is one of the most common heart arrhythmia with estimated prevalence of approximately 3% in adults aged 20 years or older, with a predicted rise in the future, as population is aging. It is one of the major cause of stroke, heart failure, sudden death and other cardiovascular morbidity. Patients with AF have poorer quality of life with symptoms like palpitations, breathlessness, chest pain, sleeping disorders and psychosocial distress. ECG screening for AF is recommended in populations at risk of AF, including older persons, patients with hypertension, diabetes, obesity or chronic kidney disease. The diagnosis of AF is confirmed when ECG is showing irregular RR intervals and no evident P waves for at least 30 seconds. Optimal treatment of underlying cardiovascular conditions, such as hypertension, ischaemic heart disease, valvular heart disease and heart failure, can adequately prevent occurrence of AF. In general management of AF, it is important to evaluate each patient for AF-related symptoms, using the modified European Heart Rhythm Association (EHRA) score. Patients need appropriate information, education and motivation to support the management of their condition, with proposed life style changes to all suitable cases for more effective treatment. Oral anticoagulation is indicated in most AF patients, unless they are at low risk for cardioembolic stroke based on the CHA²DS²-VASc score, or have absolute contraindication for anticoagulation. A non-vitamin K antagonist oral anticoagulant (NOAC) is preferred over varfarin in all patients with non-valvular AF. In patients with valvular AF (i.e., moderate-to-severe mitral stenosis, mechanical heart valves) or severe kidney disease, vitamin K antagonist is indicated. Elevated bleeding risk based on the HAS-BLED score is not a contraindication for anticoagulation, but it should be reduced by treating hypertension, minimising the use of antiplatelets and NSAIDs, eliminating causes of blood loss, achieving stable INR values on vitamin K antagonists and avoiding alcohol intake. Echocardiographic assessment of cardiac function can guide the choice of appropriate rate control therapy. Rate control medications are used in all AF patients to achieve ventricular rate control <110 beats per minute at rest. Increased dosage or additional rate control therapy is used in patients with persistent symptoms of AF. In selected suitable patients rhythm control is the treatment strategy of choice (i.e., restoring and maintaining sinus rhythm) for the quality of life improvement and lower morbidity. Rhythm control therapy should not be used in asymptomatic patients and those with permanent AF. Acute rhythm control can be achieved by electrical and pharmacological cardioversion, used to restore sinus rhythm in selected patients, after managing the risk of stroke. Anti-arrhythmic drugs are selected and used based on the underlying heart disease and their safety profile. Catheter ablation of AF (pulmonary vein isolation) should be considered when antiarrhythmic drugs fail or in suitable patients as first-line treatment for symptomatic paroxysmal AF. Surgical AF ablation can be performed in symptomatic patients during cardiac surgery for other reasons. Oral anticoagulation for stroke prevention should be continued even after apparently successful AF ablation. An integrated approach to AF management is recommended, including a cardiologist, interventional electrophysiologist and experienced cardiac surgeon (AF Heart Team), for guidelines-adherent treatment, aimed to improve outcomes in all patients.