

Version 2010

ESSENTIAL MESSAGES FROM ESC GUIDELINES

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ESC ESSENTIAL MESSAGES

ESC GUIDELINES FOR THE MANAGEMENT OF ATRIAL FIBRILLATION (2010 VERSION)

The Task Force for the Management of Patients with Atrial Fibrillation (2010 Version)
of the European Society of Cardiology (ESC)
Developed with the special contribution of the European Heart Rhythm Association
Endorsed by the European Association for Cardio-Thoracic Surgery (EACTS)

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Take home messages

1. AF is a chronic, usually progressive disease of the atria. AF depends to a variable degree on substrate (atrial disease) and triggers. Electrical triggers often originate from the pulmonary veins. Atrial arrhythmias (ectopy or AF) should be taken as indicators of an atrial disease.

2. AF is common. The prevalence is 1% in the general population and increases with age (> 10% in octogenarians). In addition, an unknown number of persons suffers from undiagnosed, silent AF, estimated to be almost as many as patients with diagnosed AF.

3. AF is associated with double the death rate and AF increases substantially the risk of heart failure and stroke. AF impairs the quality of life of most of those affected.

4. The most common aetiological factors for AF are hypertension, heart failure, ischaemic heart disease and valvular disease. There are heritable forms of AF and AF is also associated with high-intensity endurance exercise.

5. Antithrombotic therapy to prevent thromboembolism

- Oral anticoagulation is effective in preventing ischaemic strokes in AF patients and is the only available treatment modality that decreases cardiovascular mortality in AF patients. Therefore, most patients with AF benefit from oral anticoagulant therapy.
- Antithrombotic therapy is recommended for all patients with AF, except in those at low risk (lone AF, aged < 65 years), or with contraindications.
- Whether AF is paroxysmal, persistent or permanent in nature should not influence the choice of antithrombotic therapy.
- The risk of bleeding should be assessed in all patients with AF prior to initiation of antithrombotic therapy (see HAS-BLED bleeding risk score).
- Oral anticoagulation is preferred to aspirin in AF patients with one or more stroke risk factors (see CHA₂DS₂-VASc score).
- Aspirin has a limited role in AF and may not be any safer than oral anticoagulation, especially in the elderly.

6. Initial management of patients with AF

- Consideration of antithrombotic therapy.
- Treatment of associated complications.
- Initial therapeutic plan for rate control therapy.
- Concentrate on relief of symptoms and assessment of AF-associated risks.
- After the initial management of symptoms and complications, underlying causes of AF should be sought.
- Most patients with AF should be considered for an echocardiogram to assess cardiac function and the presence of structural heart disease.

7. Conversion of AF

- Sodium channel blockers such as flecainide or propafenone are preferred for pharmacological conversion in the absence of structural heart disease.
- In the presence of structural heart disease or heart failure, amiodarone is the drug of choice.
- For DC cardioversion anticoagulation therapy (> 3 weeks) should be used to minimize the risk of thromboembolism or a TEE - guided approach may be used.
- DC cardioversion is best performed with an A-P paddle position, and synchronized biphasic energy defibrillation.

Take home messages

8. Rate control.

- Rate control without rhythm control therapy is a reasonable initial therapeutic approach for most patients with AF.
- Beta blockers or non-dihydropyridine calcium channel blockers are preferred as initial monotherapy.
- Digitalis or amiodarone may be added as a second line therapy.
- Strict rate control is a non-inferior strategy to lenient rate control for AF.

9. Rhythm control

- Initial decision with respect to adding rhythm control to rate control therapy should be based on symptoms, e.g. assessed by the EHRA score.
- Safety rather than efficacy considerations should primarily guide the choice of the antiarrhythmic agent in individual patients.
- In patients with structural heart disease, the choice of drugs is determined by underlying cardiac pathology.

10. Ablation therapy

- Catheter ablation, targeting the substrate/trigger of AF is an option for drug-refractory arrhythmia in symptomatic patients with recurrent AF.
- Surgical ablation can be associated with a concomitant procedure or stand-alone via a minimally invasive approach.
- AV node ablation is a highly effective treatment for rate control but it is an irreversible and palliative strategy and leads to permanent pacemaker dependency.

11. Upstream therapy

- While results for primary prevention of AF in the absence of structural heart disease are disappointing, angiotensin receptor blockers reduce new-onset AF in patients with left ventricular dysfunction or hypertrophy.
- Guideline-based treatment of concomitant cardiovascular disease can contribute to diminish the risk of developing AF.

12. Special populations

- AF commonly occurs post-operatively, and is associated with increased risk of thromboembolism, heart failure and prolonged hospitalizations. The goal of management is ventricular rate control.
- Adequate rate control in athletes is more difficult (beta-blockers may not be tolerated or prohibited; atrial flutter with 1-to-1 conduction may be life-threatening), but important for safe sports participation.
- Patients with evidence of AF and preexcitation should undergo immediate catheter ablation of their accessory pathway.

Major gaps in evidence

1. Epidemiology and mechanisms

- Biomarkers for prediction of thromboembolic risk.
- Differences in aetiology in other (non-western) world regions. Characterization of the population with “silent”, undiagnosed AF.

2. Diagnosis and general management

- It is likely that systematic ECG screening for AF would result in earlier diagnosis of silent AF and may help to prevent AF-related complications. This would require formal validation of screening methods in different populations.
- The diagnostic value of any monitoring strategy for AF detection is not clear.
- So far, there is no signal that progression of AF can be stopped by rhythm control interventions. The benefit of a comprehensive, multimodal therapy of AF awaits formal testing.
- The diagnostic accuracy especially the specificity of implantable loop recorders for AF detection is not known.

3. Anticoagulation

- The full role of new oral anticoagulants in AF is not established.
- While trial data suggest that the newer anticoagulants may be safer and/or more effective in preventing strokes in AF, there is so far no experience in clinical practice outside controlled trials.
- It is uncertain whether the complete absence of any AF in patients post-ablation or post-cardioversion, represents a ‘low risk’ state for thromboembolism, allowing cessation of oral anticoagulation therapy. Emerging data suggest that late AF recurrence may occur even in these patients.
- It is uncertain if the new oral anticoagulants have adequate safety and efficacy for thromboprophylaxis in AF patients undergoing cardioversion, or in those with prosthetic heart valves, etc.
- It is not known how combination therapy of newer anticoagulants with antiplatelet drugs (e.g. after stenting) compares with combination therapy with VKAs.

4. Conversion

- The role of antiarrhythmic agents to enhance the success of DCC remains unclear.
- It is uncertain if new atrial selective antiarrhythmic drugs will offer better outcomes compared to sodium channel blockers.

5. Rate and rhythm control

- There is a lack of trials using hard clinical endpoints and newer rhythm control interventions in patients with AF.
- The impact of rate control by AV node ablation on prognosis in symptomatic AF patients is unknown.
- There are no trials on the effects of antiarrhythmic drug therapy in patients with permanent AF.

6. LA ablation therapy

- The long term success of LA ablation for prevention of AF recurrence is not yet documented.
- The long-term effect of LA ablation on mortality and hospitalizations is not yet known.

7. Upstream therapy

- It remains unclear if upstream therapy per se (alone) is useful for secondary prevention of AF. Apart from patients with heart failure or left ventricular hypertrophy, the patient groups who will benefit from upstream therapy are not well defined at present.
- The interaction of antiarrhythmic drugs with therapeutic agents used for upstream therapy remains to be elucidated.

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