Management of atrial fibrillation: a practical and useful synopsis of last guidelines

Gualtiero Palareti

Arianna Anticoagulation Foundation, Bologna, Italy

Atrial fibrillation (AF) is the most common arrhythmia and a disease of aging, as its prevalence increases in the elderly population, reaching approximately 10% in people aged 80 years and older.[1] More than 66% of nearly 6,000 Italian AF patients included in a dedicated observational study were >75 years of age.[2] AF is a strong independent risk factor for stroke due to thrombus formation in and embolization from the left atrial appendage. AF is associated with a fivefold increase in the risk of stroke,[3,4] which tends to be more severe with higher mortality and disability than strokes in patients without AF.[5] To reduce the risk of stroke or peripheral embolism, treatment with oral anticoagulants is recommended for most patients with AF.[6]

The diagnosis and management of patients with AF has been the subject of a number of dedicated guidelines sponsored by scientific societies and updated over the years. Clinical guidelines are fundamental tools to guide professionals in their daily clinical practice and contribute enormously to more homogeneous and better patient management based on the available evidence. Current guideline documents that address issues affecting large patient populations (such as patients with AF) are hundreds of pages long, making them difficult and time-consuming to read. In addition, physicians are generally very busy, and their time does not allow for extensive and in- depth use of all the elements that guidelines address in detail.

To address these issues and promote the dissemination of guidelines, some journals have published a series of concise articles that summarize the most important guidelines. The Journal of the American College of Cardiology has published "2023 Atrial Fibrillation Guideline-at-a Glance" by Wiggins *et al.,*[7] which focuses on the "Top 10 take home messages" taken directly from the ACC/AHA/ACCP/HRS 2023 Atrial Fibrillation Guideline.[8] More recently, as part of its "Clinical Guidelines Synopsis" series, JAMA published the article "Management of Atrial Fibrillation" by Alenghat *et al*.,[9] which highlights selected recommendations from the same ACC/AHA/ACCP/HRS Atrial Fibrillation Guideline cited above, while commenting on other points of interest. After citing selected recommendations, including the importance of an appropriate lifestyle, the recommended use of direct oral anticoagulants (DOACs) unless the presence of moderate/severe mitral stenosis or mechanical heart valves warrants treatment with vitamin K antagonists (VKA), and others, the summary addresses other highly relevant issues.

To reduce the risk of stroke, most patients with AF who have a 2% or greater annual risk of stroke should be treated with DOACs, which were associated with fewer strokes (HR 0.81; 95% CI, 0.74-0.89) and lower rates of all-cause death (HR 0.92; 95% CI, 0.87-0.97) at standard doses compared with VKA in a recent meta-analysis of 4 randomized clinical trials (RCTs).[10] This recommendation does not apply to patients with AF and moderate-to-severe mitral stenosis or mechanical valve prosthesis; in fact, these patients should be treated with warfarin, which has been shown to be associated with fewer thromboembolic and bleeding events than DOACs in these patient settings.[11-13] After confirming that rhythm control is preferable for most AF patients to reduce cardiovascular morbidity, the Synopsis addresses the potential harms of antiarrhythmic drug therapy and ablation procedures, which require repeat procedures in up to 50% of cases to achieve durable rhythm control.[14]

The authors of the synopsis highlight the recommendations of the "2023 Guideline for the Diagnosis and Management of Atrial Fibrillation"[8] to reduce the risk of bleeding in all patients with AF and especially in those with concomitant ischemic coronary disease. In general, percutaneous left atrial appendage occlusion (LAAO) can be considered as a valid alternative to anticoagulation in patients at high risk of bleeding to avoid the associated risk of bleeding.

However, the authors cite that a recent RCT reported that the annual rate of thromboembolic events (2.6%) was the same in patients randomized to LAAO or DOACs.[15]

It is clearly expected that a non-negligible proportion of patients with AF will also have ischemic coronary disease due to their age and will need to undergo percutaneous coronary intervention (PCI), a procedure that requires dual antiplatelet therapy with aspirin plus a P2Y12 inhibitor to prevent re-occlusion.

Correspondence: Gualtiero Palareti, Fondazione Arianna Anticoagulazione, Via Paolo Fabbri 1/3, 40138 Bologna, Italy

Key words: atrial fibrillation; management; treatment.

Received: 16 December 2024.
Accepted: 27 January 2025.

Bleeding, Thrombosis and Vascular Biology 2025; 1:168
doi:10.4081/btvb.2025.168

Based on the available evidence, guidelines recommend a duration of dual therapy of only 1 to 4 months, after which aspirin can be discontinued.[16] This is an important clinical recommendation because shortening the duration of dual antiplatelet therapy may reduce the high risk of bleeding usually associated with this treatment. In addition, antiplatelet therapy is not required in patients with atrial fibrillation treated with DOACs beyond 1 year after revascularization or in patients with chronic coronary artery disease. A recently published RCT[17] showed that in patients with AF and stable coronary artery disease, monotherapy with edoxaban (an anti-Xa DOAC) was associated with a lower risk of a composite of death from any cause, myocardial infarction, stroke, and major or non-major but clinically relevant bleeding at 12 months, compared with dual antithrombotic therapy (edoxaban plus an antiplatelet agent).

In conclusion, the "Management of Atrial Fibrillation" synopsis[9] from the JAMA Clinical Guidelines Synopsis series is an excellent tool to guide physicians in the management of patients with AF. This synopsis provides a practical and non-time-consuming approach to learning about the most recent and clinically relevant guideline recommendations for the management of this highly prevalent patient population. Consultation of this synopsis is highly recommended for physicians who wish to be updated on the best clinical practice currently recommended for this large and complex patient population.

References

1. Go AS, Hylek EM, Phillips KA, et al. Prevalence of diagnosed atrial fibrillation in adults - National implications for rhythm management and stroke prevention: the AnTicoagulation and Risk Factors in Atrial Fibrillation (ATRIA) study. JAMA 2001;285:2370-5.
2. Poli D, Antonucci E, Ageno W, et al. Inappropriate underdosing of direct oral anticoagulants in atrial fibrillation patients: results from the START2-AF registry. J Clin Med 2024;13:2009.
3. Wolf PA, Abbott RD, Kannel WB. Atrial Fibrillation as an independent risk factor for stroke - The Framingham Study. Stroke 1991;22:983-8.
4. Hart RG, Pearce LA, Aguilar MI. Meta-analysis: Antithrombotic therapy to prevent stroke in patients who have nonvalvular atrial fibrillation. Ann Intern Med 2007;146: 857-67.
5. Benjamin EJ, Wolf PA, D'Agostino RB, et al. Impact of atrial fibrillation on the risk of death: the Framingham Heart Study. Circulation 1998;98:946-52.
6. Kirchhof P, Benussi S, Kotecha D, et al. 2016 ESC Guidelines for the management of atrial fibrillation developed in collaboration with EACTS. Europace 2016;18:1609-78.
7. Wiggins BS, Cibotti-Sun M, Moore MM. 2023 Atrial fibrillation guideline-at-a-glance. J Am Coll Cardiol 2024;83:280-4.
8. Joglar JA, Chung MK, Armbruster AL, et al. 2023 ACC/AHA/ACCP/HRS guideline for the diagnosis and management of atrial fibrillation: a report of the American College of Cardiology/American Heart Association Joint Committee on Clinical Practice Guidelines. J Am Coll Cardiol 2024;83:109-279.
9. Alenghat FJ, Alexander JT, Upadhyay GA. Management of atrial fibrillation. JAMA 2024;332:1936-7.
10. Carnicelli AP, Hong H, Connolly SJ, et al. Direct oral anticoagulants versus warfarin in patients with atrial fibrillation: patient-level network meta-analyses of randomized clinical trials with interaction testing by age and sex. Circulation 2022;145:242-55.
11. Eikelboom JW, Connolly SJ, Brueckmann M, et al. Dabigatran versus warfarin in patients with mechanical heart valves. N Engl J Med 2013;369:1206-14.
12. Connolly SJ, Karthikeyan G, Ntsekhe M, et al. Rivaroxaban in rheumatic heart disease- associated atrial fibrillation. N Engl J Med 2022;387:978-88.
13. Wang TY, Svensson LG, Wen J, et al. Apixaban or warfarin in patients with an On-X mechanical aortic valve. NEJM Evid 2023;2:EVIDoa2300067.
14. Andrade JG, Deyell MW, Macle L, et al. Progression of atrial fibrillation after cryoablation or drug therapy. N Engl J Med 2023;388:105-16.
15. Osmancik P, Herman D, Neuzil P, et al. Left atrial appendage closure versus direct oral anticoagulants in high-risk patients with atrial fibrillation. J Am Coll Cardiol 2020;75:3122-35.
16. Lopes RD, Heizer G, Aronson R, et al. Antithrombotic therapy after acute coronary syndrome or PCI in atrial fibrillation. N Engl J Med 2019;380:1509-24.
17. Cho MS, Kang DY, Ahn JM, et al. Edoxaban antithrombotic therapy for atrial fibrillation and stable coronary artery disease. N Engl J Med 2024;391:2075-86.