



Management of Atrial Fibrillation of the  
European Society of Cardiology (ESC).



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Guidelines

# Guidelines for the management of atrial fibrillation: The Task Force for the Management of Atrial Fibrillation of the European Society of Cardiology (ESC) FREE

Developed with the special contribution of the European Heart Rhythm Association (EHRA),

Endorsed by the European Association for Cardio-Thoracic Surgery (EACTS),

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Guidelines summarize and evaluate all currently available evidence on a particular issue with the aim of assisting physicians in selecting the best management strategy for an individual patient suffering from a given condition, taking into account the impact on outcome, as well as the risk–benefit ratio of particular diagnostic or therapeutic means. Guidelines are no substitutes for textbooks. The legal implications of medical guidelines have been discussed previously.

A large number of Guidelines have been issued in recent years by the European Society of Cardiology (ESC) as well as by other societies and organizations. Because of the impact on clinical practice, quality criteria for development of guidelines...

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### **Antithrombotic therapy in low risk patients (CHA2DS2-VASc 0).**

25 February 2012 | [Mony Shuvy \(with Chaim Lotan\)](#)

MD, Heart Institute, Hadassah-Hebrew University Medical Center, Jerusalem, Israel.

Dear Editor

We would like point out an unclear important issue in the ESC Clinical Practice Guidelines for atrial fibrillation (European Heart Journal (2010) 31, 2369-2429) regarding to antithrombotic therapy in low risk patients (CHA2DS2-VASc 0).

In Table 9 (Approach to thromboprophylaxis in patients with AF)-the following sentence is not clear enough and may be misinterpreted.

Either aspirin 75-325 mg daily or no antithrombotic therapy. Preferred: no antithrombotic therapy rather than aspirin. It is not understood whether no antithrombotic therapy is preferred over aspirin or that there is no preference between "no therapy" and aspirin. Only in following the table legend: "Where possible, no antithrombotic therapy should be considered for such patients, rather than aspirin, given the limited data on the benefits of aspirin in this patient group (i.e., lone AF) and the potential for adverse effects, especially bleeding." Following the above legend the reader may understand that no antithrombotic therapy is preferred.

We believe that the sentence in table 9 should be rephrased in order to prevent

misunderstanding in therapeutic approach in low risk patients with AF.

## **Conflict of Interest:**

None declared

Submitted on 25/02/2012 7:00 PM GMT

## **Antithrombotic strategies following coronary artery stenting in patients on oral anticoagulation for atrial fibrillation**

14 November 2010 | Matteo Anselmino (with Mario Bollati, Marco Novara, Giuseppe Biondi-Zoccai, Imad Sheiban, and Fiorenzo Gaita)

Assistant Professor, Cardiology Division, Department of Internal Medicine, University of Turin, Italy

We read with great interest latest ESC guidelines on atrial fibrillation (AF) and myocardial revascularization. [1-2]

First, we would like to underline the discordance between the two documents: in the atrial fibrillation guidelines, new antiplatelet and anticoagulant therapy indications after coronary stenting are provided, but in the myocardial revascularization ones, no new elements are reported despite the relevant significance of this topic.

Second, in the AF guidelines, the authors conclude that oral anticoagulation therapy may be "as effective at least as aspirin" in the secondary prevention of ischemic heart disease, including patients with prior coronary stenting. Regarding this very hot point, in our opinion no sufficient evidence is provided, as all available randomized studies have been conducted in patients with ischemic heart disease without coronary stenting. [3-4] On the other hand, it is well known that patients requiring both anticoagulant and antiplatelet therapy are higher- risk population, but this is due mainly to relevant comorbidities not significantly reduced in anticoagulation only therapy. [5]

Particularly, both guidelines provide references on this topic consisting only of a consensus document, which in turn does not provide sufficient evidences. [6]

Curiously, recommendations clearly given in the same paper and reported in the AF guidelines (see Table 11) are classified as level C, deriving from "Consensus of opinion of the experts and/of small studies, retrospective studies, registries".

In conclusion, we believe that recommendations for antiplatelet therapy after percutaneous coronary stenting in patients with an indication to anticoagulant therapy need further evidence, considering the potential benefits but also the potential harms associated with combined dual antiplatelet therapy and oral anticoagulants.

## References

1. The Task Force for the Management of Atrial Fibrillation of the European Society of Cardiology. Guidelines for the management of atrial fibrillation. *European Heart Journal* doi:10.1093/eurheartj/ehq278
2. The Task Force on Myocardial Revascularization of the European Society of Cardiology (ESC) and the European Association for Cardio-Thoracic Surgery (EACTS). *European Heart Journal* doi:10.1093/eurheartj/ehq277
3. Rotheberg MB, Celestin C, Fiore LD. Warfarin plus aspirin after myocardial infarction or the acute coronary syndromes: meta-analysis with estimates of risk and benefits. *Ann Int Med* 2005; 143:241
4. Andreotti F, Testa L, Biondi Zoccai G, Crea F. Aspirin plus warfarin compared to aspirin alone after acute coronary syndromes: an updated and comprehensive meta-analysis of 25.307 patients. *Eur Heart J* 2006; 27:519
5. Karjalainen PP, Porela P, Ylitalo A, Vikman S, Nyman K, Vaittinen MA, Airaksinen TJ, Niemel M, Vahlberg T, Airaksinen KE. Safety and efficacy of combined antiplateletwarfarin therapy after coronary stenting. *Euro Heart J* 2007; 28:726
6. Lip GY, Huber K, Andreotti F et al. Management of Antithrombotic Therapy in Atrial Fibrillation Patients Presenting with Acute Coronary Syndrome and/or Undergoing Percutaneous Coronary Intervention/ Stenting. *Thromb Haemost* 2010; 103: 13

## Conflict of Interest:

None declared

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# Patients after Stentimplantation

14 November 2010 | Karl Mischke (with Rainer Hoffmann)

MD, Department of Cardiology RWTH Aachen University

We read with interest the new ESC guidelines on atrial fibrillation (1) and the consensus document of the European society of cardiology working group on thrombosis (2). The documents propose a practical approach to antiplatelet and anticoagulant therapy in patients presenting with atrial fibrillation and acute coronary syndrome. The proposed schemes nicely take into account the type of stent and the proposed duration of dual or triple therapy with aspirin, clopidogrel and vitamin K antagonists (VKA). The recommendation for long-term medication, i.e. lifelong anticoagulation with VKA alone without the addition of antiplatelet therapy following coronary artery stenting, is likely to have a large impact on clinical practise and - in our view - merits more discussion.

Given the knowledge that lack of clopidogrel medication even later than 6 months after stent implantation is a predictor of stent thrombosis after BMS and DES implantation, the known annual rate of late stent thrombosis of approximately 0.6% even with antiplatelet therapy and the limitations of VKA to prevent stent thrombosis a cautious approach to complete termination of antiplatelet therapy appears warranted (3,4). The ESC STEMI guidelines from 2008 propose lifelong therapy with aspirin in all patients after STEMI (5). Although numerous studies have demonstrated the benefit of VKA in coronary artery disease and the ESC STEMI guidelines approve the replacement of aspirin by VKA in patients with atrial fibrillation, most studies were performed before the use of DES (5). In a large meta-analysis of patients with acute coronary syndrome including more than 10.000 patients with infarction the combination of aspirin and anticoagulation prevented three major adverse events and caused one major bleed per 100 patients treated compared with aspirin alone (6). Oral anticoagulation in addition to aspirin is thus recommended as a class II recommendation in patients at high risk of thromboembolic events (5). The ACCP guidelines from 2008 also recommend the combined use of aspirin and VKA in patients after PCI in need of oral anticoagulation as long-term treatment (grade 1 recommendation) (7). Taking into account that the bleeding risk of patients on VKA has decreased due to better INR control, a lifelong dual therapy might be beneficial in selected patients, e.g. patients with a low bleeding risk and multiple DES implantations.

We would have appreciated a more detailed discussion on the topic of lifelong VKA monotherapy in patients with atrial fibrillation requiring oral anticoagulation after stent implantation.

## REFERENCES

1. Camm AJ, Kirchhof P, Lip GYH, Schotten U, Savelieva I, Ernst S, Van Gelder IC, Al-Attar N, Hindricks G, Prendergast B, Heidbuchel H, Alfieri O, Angelini A, Atar D, Colonna P, De Caterina R, De Sutter J, Goette A, Gorenek B, Haldal M, Hohloser SH, Kolh P, Le Heuzey J-Y, Ponikowski P, Rutten FH. Guidelines for the management of atrial fibrillation: The Task Force for the Management of Atrial Fibrillation of the European Society of Cardiology (ESC). *Eur Heart J* 2010 [Epub ahead of print]
2. Lip GY, Huber K, Andreotti F, Arnesen H, Airaksinen JK, Cuisset T, Kirchhof P, Marin F; Consensus Document of European Society of Cardiology Working Group on Thrombosis. Antithrombotic management of atrial fibrillation patients presenting with acute coronary syndrome and/or undergoing coronary stenting: executive summary - a Consensus Document of the European Society of Cardiology Working Group on Thrombosis, endorsed by the European Heart Rhythm Association (EHRA) and the European Association of Percutaneous Cardiovascular Interventions (EAPCI). *Eur Heart J* 2010;31(11):1311-8.
3. van Werkum JW, Heestermans AA, Zomer AC, Kelder JC, Suttorp MJ, Rensing BJ, Koolen JJ, Brueren BR, Dambrink JH, Hautvast RW, Verheugt FW, ten Berg JM. Predictors of coronary stent thrombosis: the Dutch Stent Thrombosis Registry. *J Am Coll Cardiol.* 2009;53(16):1399-409.
4. Daemen J, Wenaweser P, Tsuchida K, Abrecht L, Vaina S, Morger C, Kukreja N, Juni P, Sianos G, Hellige G, van Domburg RT, Hess OM, Boersma E, Meier B, Windecker S, Serruys PW. Early and late coronary stent thrombosis of sirolimus-eluting and paclitaxel-eluting stents in routine clinical practice: data from a large two-institutional cohort study. *Lancet* 2007;369(9562):667-78
5. Van de Werf F, Bax J, Betriu A, Blomstrom-Lundqvist C, Crea F, Falk V, Filippatos G, Fox K, Huber K, Kastrati A, Rosengren A, Steg PG, Tubaro M, Verheugt F, Weidinger F, Weis M; ESC Committee for Practice Guidelines (CPG), Vahanian A, Camm J, De Caterina R, Dean V, Dickstein K, Filippatos G, Funck-Brentano C, Hellemans I, Kristensen SD, McGregor K, Sechtem U, Silber S, Tendera M, Widimsky P, Zamorano JL, Silber S, Aguirre FV, Al-Attar N, Alegria E, Andreotti F, Benzer W, Breithardt O, Danchin N, Di Mario C, Dudek D, Gulba D, Halvorsen S, Kaufmann P, Kornowski R, Lip GY, Rutten F. Management of acute myocardial infarction in patients presenting with persistent ST-segment elevation: the Task Force on the Management of ST-Segment Elevation Acute Myocardial Infarction of the European Society of Cardiology. *Eur Heart J* 2008;29(23):2909-45.

6. Andreotti F, Testa L, Biondi-Zoccai GG, Crea F. Aspirin plus warfarin compared to aspirin alone after acute coronary syndromes: an updated and comprehensive meta-analysis of 25,307 patients. *Eur Heart J* 2006;27(5):519-26

7. Becker RC, Meade TW, Berger PB, Ezekowitz M, O'Connor CM, Vorchheimer DA, Guyatt GH, Mark DB, Harrington RA; American College of Chest Physicians. The primary and secondary prevention of coronary artery disease: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines (8th Edition). *Chest* 2008;133(6 Suppl):776S-814S.

## Conflict of Interest:

None declared

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