

## Letter to the Editor

# Comment on “Management of Atrial Fibrillation in Critically Ill Patients”

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Dr. Arrigo and his team added important knowledge thanks to their recently published review about atrial fibrillation (AF) in critically ill patients [1]. I would like to address several issues in the light of most recent literature. Critically ill patients do have increased risk of cardiac embolism despite short exposure time of AF, especially septic patients [2]. This can be best assessed by past stroke, CHADS<sub>2</sub> (or CHA<sub>2</sub>DS<sub>2</sub>-VASc) score [3]. However, best anticoagulation is not known in critically ill patients with increased bleeding risk. In their review, Dr. Arrigo and colleagues state that unfractionated heparin (short half-life and easy to antagonize) is their first choice [1]. First, the dosage used may not be adequate and recommended posology may reach biological target more often. Even with strict protocolization, unfractionated heparin has significant inter- and intraindividual variability and short therapeutic interval. Second, bridging with heparin has been associated with more haemorrhage (and as much thrombosis) compared with procedures under oral anticoagulants by vitamin K antagonists [4]. Thus, best anticoagulation is not mandatory, the more logical choice, and is not known for critically ill patients.

The first risk that comes to intensive care physicians mind is hemodynamic compromise, as opposed to ambulatory setting patients whose major risk is cardioembolic. Rhythm control is recommended for poorly tolerated AF by means of antiarrhythmic drugs and/or direct current cardioversion [5]. Though, variable conversion rates are reported in the literature. We were surprised by the very infrequent conversion rates of direct current cardioversion about 30% reported in series without drug enhancement [6, 7]. We

reported 80% immediate success rate of direct current cardioversion, mostly with drug enhancement [3]. However, side effects of antiarrhythmic drugs (amiodarone and/or magnesium, without vernakalant) were common, 19% [3]. We still consider direct current cardioversion as first line treatment for poorly tolerated AF, even in critically ill patients, provided obvious triggering factor is controlled [5].

## Conflict of Interests

The author declares that there is no conflict of interests regarding the publication of this paper.

## References

- [1] M. Arrigo, D. Bettex, and A. Rudiger, “Management of atrial fibrillation in critically ill patients,” *Critical Care Research and Practice*, vol. 2014, Article ID 840615, 10 pages, 2014.
- [2] A. J. Walkey, R. S. Wiener, J. M. Ghobrial, L. H. Curtis, and E. J. Benjamin, “Incident stroke and mortality associated with new-onset atrial fibrillation in patients hospitalized with severe sepsis,” *Journal of the American Medical Association*, vol. 306, no. 20, pp. 2248–2255, 2011.
- [3] S. Champion, Y. Lefort, B. A. Gaüzère et al., “CHADS<sub>2</sub> and CHA<sub>2</sub>DS<sub>2</sub>-VASc scores can predict thromboembolic events after supraventricular arrhythmia in the critically ill patients,” *Journal of Critical Care*, vol. 29, no. 5, pp. 854–858, 2014.
- [4] D. H. Birnie, J. S. Healey, G. A. Wells et al., “Pacemaker or defibrillator surgery without interruption of anticoagulation,”

*The New England Journal of Medicine*, vol. 368, no. 22, pp. 2084–2093, 2013.

- [5] A. J. Camm, P. Kirchhof, G. Y. Lip et al., “Guidelines for the management of atrial fibrillation: the Task Force for the Management of Atrial Fibrillation of the European Society of Cardiology (ESC),” *European Heart Journal*, vol. 31, no. 19, pp. 2369–2429, 2010.
- [6] A. Mayr, N. Ritsch, H. Knotzer et al., “Effectiveness of direct-current cardioversion for treatment of supraventricular tachyarrhythmias, in particular atrial fibrillation, in surgical intensive care patients,” *Critical Care Medicine*, vol. 31, no. 2, pp. 401–405, 2003.
- [7] A. Roth, I. Elkayam, I. Shapira et al., “Effectiveness of prehospital synchronous direct-current cardioversion for supraventricular tachyarrhythmias causing unstable hemodynamic states,” *The American Journal of Cardiology*, vol. 91, no. 4, pp. 489–491, 2003.



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