

MEETING ABSTRACT

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# When should we discontinue antiarrhythmic therapy for atrial fibrillation after abdominal surgery?

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## Aim of the study

The purpose of this study was to determine whether the duration of antiarrhythmic therapy after discharge from the hospital following abdominal surgery is related to the incidence of atrial fibrillation (AF) recurrence in elderly patients with the occurrence of peri-operative AF.

## Background

The occurrence of peri-operative AF after abdominal surgery is a clinical condition burdened by several complications, especially in the elderly [1-3]. When AF is successfully converted to sinus rhythm, it is unlikely to recur, and nearly all of these patients are discharged from the hospital in sinus rhythm. It is not clear how soon these patients may discontinue antiarrhythmic therapy to avoid drug side effects without risking recurrence of AF.

The recurrence of AF needs different kind of treatment. Medical therapy includes various antiarrhythmic drugs to control heart rate and restore sinus rhythm and anticoagulation to reduce the thromboembolic risk [4]. Overactivation of sympathetic nervous system, related to surgery stress [5], could be reduced by the treatment with antiarrhythmic drugs, such as Beta Blockers, and may reduce the incidence of AF recurrence [6-10].

## Methods

A pilot study was conducted in 19 elderly patients (age > 65 years) who underwent abdominal surgery (right hemicolectomy, sigmoidectomy and anterior rectal resection) and with occurrence of peri-operative AF that

successfully reverted to sinus rhythm. They were prospectively randomized at dismissal to receive antiarrhythmic therapy for 1 week (six patients in group A), 3 weeks (seven patients in group B), or 6 weeks (six patients in group C). Patients were followed up for an additional 4 weeks after discontinuation of antiarrhythmic therapy for detection of recurrence of AF.

## Results

There was no significant difference in the recurrence of AF among groups (0%, 2%, and 0% for groups A, B, and C, respectively).

## Conclusions

In elderly patients with peri-operative AF after abdominal surgery, converted to normal sinus rhythm before hospital discharge, have a benign course and the duration of antiarrhythmic therapy shorter than one week is appropriate.

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## References

1. Rengo F, Parisi V, Rengo G, Femminella GD, Rengo C, Zicarelli C, Pagano G, Festa G, De Lucia C, Leosco D: **Instruments for geriatric assessment: new multidimensional assessment approaches.** *JOURNAL OF NEPHROLOGY* 2012, **25**:73-78, ISSN: 1121-8428, doi: 10.5301/jn.5000164.
2. Pilotto A, Addante F, Franceschi M, Leandro G, Rengo G, D'Ambrosio P, Longo MG, Rengo F, Pellegrini F, Dallapiccola B, Ferrucci L: **A**

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- Multidimensional Prognostic Index (MPI) based on a Comprehensive Geriatric Assessment Predicts Short-Term Mortality in Older Patients with Heart Failure. *Circulation: Heart Failure* 2010, **3**:14-20.
- Rispoli C, Rocco N, Iannone L, Amato B: **Developing guidelines in geriatric surgery: role of the grade system.** *BMC Geriatrics* 2009, **9**(SUPPL.1):A99.
  - Rengo G, Pagano G, Squizzato A, Moja L, Femminella GD, de Lucia C, Komici K, Parisi V, Savarese G, Ferrara N, Perrone-Filardi P, Leosco D: **Oral anticoagulation therapy in heart failure patients in sinus rhythm: a systematic review and meta-analysis.** *PLoS One* 2013, **8**(1):e52952, doi:10.1371/journal.pone.0052952.
  - Paolillo S, Rengo G, Pagano G, Pellegrino T, Savarese G, Femminella GD, Tuccillo , Boemio A, Attena E, Formisano R, Petraglia L, Scopacasa F, Galasso G, Leosco D, Trimarco B, Cuocolo A, Perrone-Filardi P: **Impacto of Diabetes Mellitus on Cardiac Sympathetic Innervation in Patients With Heart Failure. A Iodine-123 meta-iodobenzylguanidine (I123MIBG) Scintigraphic Study.** *Diabetes Care* 2013.
  - Rengo G, Lymperopoulos A, Zincarelli C, Femminella Gd, Liccardo D, Pagano G, de Lucia C, Cannavo A, Gargiulo P, Ferrara N, Perrone Filardi P, Koch Wj, Leosco D: **Blockade of beta-adrenoceptors restores the GRK2-mediated adrenal alpha(2) -adrenoceptor-catecholamine production axis in heart failure.** *BRITISH JOURNAL OF PHARMACOLOGY* 2012, **166**:2430-2440, ISSN: 1476-5381, doi: 10.1111/j.1476-5381.2012.01972.x.
  - Rengo G, Zincarelli C, Femminella GD, Liccardo D, Pagano G, de Lucia C, Altobelli GG, Cimini V, Ruggiero D, Perrone-Filardi P, Gao E, Ferrara N, Lymperopoulos A, Koch WJ, Leosco D: **Myocardial beta(2) -adrenoceptor gene delivery promotes coordinated cardiac adaptive remodelling and angiogenesis in heart failure.** *BRITISH JOURNAL OF PHARMACOLOGY* 2012, **166**:2348-2361, ISSN: 1476-5381, doi: 10.1111/j.1476-5381.2012.01954.x.
  - Rengo G, Perrone-Filardi P, Femminella GD, Liccardo D, Zincarelli C, de Lucia C, Pagano G, Marsico F, Lymperopoulos A, Leosco D: **Targeting the beta-adrenergic receptor system through G-protein-coupled receptor kinase 2: a new paradigm for therapy and prognostic evaluation in heart failure: from bench to bedside.** *CIRCULATION. HEART FAILURE* 2012, **5**:385-391, ISSN: 1941-3289, doi: 10.1161/CIRCHEARTFAILURE.112.966895.
  - Rengo G, Leosco D, Zincarelli C, Marchese M, Corbi G, Liccardo D, Filippelli A, Ferrara N, Lisanti MP, Koch WJ, Lymperopoulos A: **Adrenal GRK2 lowering is an underlying mechanism for the beneficial sympathetic effects of exercise training in heart failure.** *American Journal of Physiology - Heart and Circulatory Physiology* 2010, **24**(9).
  - Leosco D, Rengo G, Iaccarino G, Golino L, Marchese M, Fortunato F, Zincarelli C, Sanzari E, Ciccarelli M, Galasso G, Altobelli GG, Conti V, Matrone G, Cimini V, Ferrara N, Filippelli A, Koch WJ, Rengo F: **Exercise promotes angiogenesis and improves  $\beta$ -adrenergic receptor signalling in the post-ischaemic failing rat heart.** *Cardiovascular Research* 2008, **30**(3).

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