

# Perioperative Management of Patients Receiving New Oral Anticoagulants



## An International Survey

David Faraoni, MD<sup>a,\*</sup>, Charles Marc Samama, MD, PhD<sup>b</sup>,  
Marco Ranucci, MD, FESC<sup>c</sup>, Wulf Dietrich, MD, PhD<sup>d</sup>,  
Jerrold H. Levy, MD, FAHA, FCCM<sup>e</sup>

### KEYWORDS

• New oral anticoagulants • Survey • Guidelines • Recommendation

### KEY POINTS

- New oral anticoagulants (NOACs) are increasingly replacing standard anticoagulants.
- These new drugs have recently been introduced into clinical practice, and specific knowledge regarding preoperative interruption, anticoagulation assessment, and reversal therapies is needed. In this international survey, it was observed that physicians had limited knowledge about the perioperative management of patients treated with NOACs and the management of emergency procedures.
- This situation has arisen from the lack of published experience, guidelines, widely available strategies to monitor NOAC effects, and clinically effective reversal strategies.
- Robust prospective studies are urgently needed to define guidelines and improve perioperative management.

The Society of Cardiovascular Anesthesiologists (SCA, <http://www.scahq.org>) and the European Association of Cardiothoracic Anaesthesiologists (EACTA, <http://www.eacta.org>) both endorsed this international survey.

Conflict of Interest Statements: Dr Samama received Speaker's fee from Bayer, BMS, Boehringer-Ingelheim, CSL Behring, Daichii, GSK, LFB, Octapharma, Pfizer, Rovi, Sanofi; Advisory committees, Bayer, BMS, Boehringer-Ingelheim, Daichii-Sankyo, GSK, Pfizer, Roche, Sanofi; Primary Investigator, Bayer, BMS, Boehringer-Ingelheim, LFB, GSK, Sanofi. Prof. J.H. Levy serves on steering committees for Boehringer Ingelheim, CSL Behring AG, Grifols, Janssen Pharmaceuticals, and The Medicines Company.

<sup>a</sup> Department of Anesthesiology, Queen Fabiola Children's University Hospital, 15 JJ Crocq Avenue, Brussels B-1020, Belgium; <sup>b</sup> Department of Anesthesia and Intensive Care, Cochin Hotel-Dieu University Hospitals, Place du Parvis Notre-Dame, 1, Paris 75181, France; <sup>c</sup> Department of Cardiothoracic and Vascular Anesthesia and Intensive Care, IRCCS Policlinico San Donato, Via Morandi, 30, San Donato Milanese, Milan 20097, Italy; <sup>d</sup> Institute for Research in Cardiac Anesthesia, Winthirst 4, Munich 80639, Germany; <sup>e</sup> Duke University School of Medicine, Divisions of Cardiothoracic Anesthesiology and Critical Care, Duke University Hospital, 2301 Erwin Road, Durham, NC 27710, USA  
\* Corresponding author.

E-mail address: [davidfaraoni@icloud.com](mailto:davidfaraoni@icloud.com)

Clin Lab Med 34 (2014) 637–654  
<http://dx.doi.org/10.1016/j.cll.2014.06.006>

[labmed.theclinics.com](http://labmed.theclinics.com)

0272-2712/14\$ – see front matter © 2014 Elsevier Inc. All rights reserved.

## INTRODUCTION

The direct thrombin inhibitor dabigatran etexilate (Pradaxa [Boehringer-Ingelheim Pharma GmbH, Ingelheim am Rhein, Germany]) and direct factor Xa inhibitors rivaroxaban (Xarelto [Johnson and Johnson/Bayer HealthCare AG, Leverkusen, Germany]) and apixaban (Eliquis [Bristol Myers Squibb/Pfizer, Bristol-Myers Squibb House, Uxbridge, United Kingdom]) are increasingly used to prevent stroke in patients with nonvalvular atrial fibrillation,<sup>1</sup> for the treatment of venous thromboembolic diseases,<sup>2</sup> and for post-orthopedic surgery thromboprophylaxis.<sup>3</sup> In addition, rivaroxaban is indicated for the prevention of atherothrombotic events in adults after an acute coronary syndrome.<sup>4</sup>

The main objective of the present study is, therefore, to assess (1) physicians' current level of knowledge about perioperative management of patients treated with NOACs, (2) the current practices, and (3) the perspectives needed to improve the management of patients treated with NOACs. The study was performed both in Europe and in the United States using a self-reported Web-based survey. The results from this study will help to determine the potential need for future educational tools and practice guidelines for the perioperative management of patients treated with NOACs.

## METHODS

A survey comprising 31 questions was developed to assess physicians' current knowledge about perioperative management of patients treated with NOACs, current practices, and perspectives needed to improve patient management. The survey was divided into 5 sections: demographic data (6 questions), the use of guidelines (7 questions), practices in case of scheduled surgery (12 questions), practices in case of emergent procedures (4 questions), and perspectives (2 questions). The survey questionnaire is available in the supplementary material ([Appendix 1](#)).

An invitation to participate in the survey was sent by e-mail to all members of the Society of Cardiovascular Anesthesiologists (SCA) and the European Association of Cardiothoracic Anaesthesiologists (EACTA). The survey was open from October 1, 2012 to December 31, 2012. To maximize response rate, 2 sequential e-mails were sent to the society members during the study period. All regular members of the 2 societies were invited without restriction. The responder's region of origin, type of practice (academic, private, government), and principal field of activity (anesthesia, intensive care, emergency department) were recorded in the demographic section. Data obtained in each section were recorded and analyzed separately.

### *Statistical Analysis*

Data are presented as number and proportion (%), or median and range (percentile 25 to percentile 75). Analyses were performed according to the number of responses obtained for each question. Categorical variables were compared using  $\chi^2$  analysis. Subanalyses were performed to compare practices by region of origin. A one-way analysis of variance (ANOVA) was used to compare the means between regions of origin. In all cases, a 2-tailed *P* value less than .05 was considered statistically significant. Statistical analyses were performed with Prism 6 for Mac OS (version 6.0a; GraphPad Software, San Diego, CA; <http://www.graphpad.com>).

## RESULTS

### *Questionnaire Responses*

A total of 450 responses were received from 5262 invited members (9%); 117/450 physicians (26%) completed the questionnaire in full. All 450 responders (100%)

Download English Version:

<https://daneshyari.com/en/article/3460276>

Download Persian Version:

<https://daneshyari.com/article/3460276>

[Daneshyari.com](https://daneshyari.com)