Thought Leadership on Thrombotic Disorders in South East Asia

Mark Y. Chan¹

¹ National University Heart Centre, Singapore

© The Author(s) 2014. This article is published with open access by Asean Federation of Cardiology

Thrombosis is a leading cause of morbidity and mortality, not only in aging industrialized countries, but also many emerging economies¹. Presently, 110 million patients are at risk of thrombosis worldwide². In Singapore, the incidence of thrombotic diseases parallels that of other developed economies; cardiovascular thrombosis alone caused 27.1% of deaths in 2010, second only to cancer at 29.3%^{3,4}.

Until recently, research on thrombotic disorders in South East Asia has developed at a far slower pace than the rest of the world, including other parts of Asia.

In this issue of the Journal, we highlight contributions from several South East Asian thought leaders on thrombotic disorders and antithrombotic compounds. At the National University Heart Centre, Singapore, cardiologists have worked hand-in-hand with colleagues from haematology and the basic sciences to develop a thrombosis research program in which we have begun testing variegins, a direct thrombin inhibitor that was discovered in Singapore and is 12 times more potent than bivalirudin⁵. With the How Effective Are Antithrombotic Therapies in Primary Percutaneous Coronary Intervention (HEAT-PPCI) study questioning the true efficacy of bivalirudin in achieving optimal anticoagulation during percutaneous coronary intervention (PCI)⁶, the search for better parenteral direct thrombin inhibitors has never been timelier. Professor Tan Huay Cheem, director of the National University Heart Centre, Singapore, and his good friend and colleague, Professor Kim Moo-Hyun, addressed the concerns of peri-PCI anticoagulation^{7,8} in

a debate held last year at the annual National University Heart Centre Atherovenous Thrombosis Symposium. I am also grateful to my friend and colleague, Dr Chee Yen Lin, a consultant haematologist at the National University Cancer Institute, Singapore, who completed her PhD on venous thromboembolism under the mentorship of the venerable Michael Greaves, Aberdeen, UK, immediate past editor of the Journal of Thrombosis and Haemostasis. In this issue of the Journal, Dr Chee has elegantly summarized the role of the novel oral anticoagulants in the management of venous thromboembolism⁹.

Last but most definitely not least, Dr Alan Fong and colleagues at the Sarawak General Hospital Heart and Cancer Centre in Kuching, Sarawak, report the results of a single-centre study comparing the performance of novel immunoassay-based pharmacodynamic measures of vitamin K antagonist activity against the international normalized ratio as the gold standard¹⁰. Dr Fong and colleagues should be congratulated on building impressive infrastructure to conduct dedicated thrombotic research in Kuching, including an early phase clinical trials unit and wet laboratory facilities that include mass spectroscopy-based pharmacokinetic capabilities.

In conclusion, there is now no lack of South East Asian research expertise in thrombotic disorders and antithrombotic compounds. We are optimistic that, with time, thought leaders in our presence will consolidate their efforts to put South East Asia on the world stage of thrombosis research.

Correspondence to: Mark Y. Chan, MBBS, MHS

Associate Professor of Medicine, Yong Loo Lin School of Medicine National University of Singapore

Senior Consultant Cardiologist, National University Heart Centre, National University Health System.

Tel: 6772 5538 Fax: 6872 2998

Email: mark_chan@nuhs.edu.sg

Published online: 21 May 2014

Open Access: This article is distributed under the terms of the Creative Commons Attribution License (CC-BY 4.0) which permits any use, distribution, and reproduction in any medium, provided the original author(s) and the source are credited.

REFERENCES

1. <http://www.who.int/mediacentre/factsheets/fs310/en/index.html> (accessed 6-1-2014).
2. <http://www.portola.com/Anticoagulant-Market> (accessed 6-1-2014).
3. <http://www.nrdo.gov.sg/uploadedFiles/NRDO/Publications/20110211%20AMI%20Information%20Paper%202010%20v3.pdf> (accessed 6-1-2014).
4. http://www.moh.gov.sg/content/moh_web/home/costs_and_financing/HospitalBillSize.html (accessed 6-1-2014).
5. **Cho Yeow Koh, Maria Kazimirova, Adama Trimnell, Peter Takac, Milan Labuda, Patricia A. Nuttall, and R. Manjunatha Kini:** Variegain, a Novel Fast and Tight Binding Thrombin Inhibitor from the Tropical Bont Tick. *Journal of Biological Chemistry*, 282, 40, 29101–29113.
6. <http://www.cardiosource.org/Science-And-Quality/Clinical-Trials/H/HEAT-PPCI.aspx> (accessed 17-4-2014)
7. **Tan Huay Cheem**, Heparin has No Place as an Anticoagulant in PCI – A Protagonist’s View, *ASEAN Heart Journal*, Springer Global Science Journals, Vol.22, no.1, 14-18 (2014).
8. **Kim Moo Hyun**, Opposition: Unfractionated heparin should no longer be used in the catheterization laboratory, *ASEAN Heart Journal*, Springer Global Science Journals, Vol.22, no.1, 38-41 (2014).
9. **Chee Yen Lin**, New Oral Anticoagulants, *ASEAN Heart Journal*, Springer Global Science Journals, Vol.22, no.1, 30-37 (2014).
10. **Alan Fong**, Thrombin and FXa plasma concentration levels in patients with atrial fibrillation on long term warfarin therapy, *ASEAN Heart Journal*, Springer Global Science Journals, Vol.22, no.1, 20-29 (2014).