2018 asia PCR

APAC HBR Guidelines & Optimal Managment of HBR patients

(Asian HBR Consensus Writing Group)

Michael Kang-Yin Lee
Queen Elizabeth Hospital, Hong Kong
Founding President, HKSTENT

National Heart Centre Singapore SingHealth

Asian Pacific Society of Interventional Cardiology

PCR

Potential conflicts of interest

Speaker's name : Michael Kang-Yin, Lee, Hong Kong

☑ I do not have any potential conflict of interest

2 July 2017

Impact of the problem

Physicians in the AP region should develop hospital- and, through collaboration, country-specific registries to help characterize and estimate the number of patients with HBR in their country or region.

Baseline and treatment predictors of increased bleeding risk in ACS, AF or PCI

Author	Title	Included trials	Patient population (n)	Baseline predictors	Treatment predictors	Bleeding endpoint
ACS						
Subherwal, et al. 2009[25]	Baseline risk of major bleeding in non-ST-segment-elevation myocardial infarction	CRUSADE	NSTEMI (17,857 validated)	Female sex, diabetes, prior vascular disease, heart rate, systolic blood pressure, signs of congestive heart failure, baseline hematocrit <36%, renal impairment		In-hospital major bleeding
Mehran et al. 2010[1]	A risk score to predict bleeding in patients with acute coronary syndromes	ACUITY, HORIZONS-AMI	ACS (17,421)	Female sex, advanced age, renal impairment, elevated WBC, anemia, NSTEMI, STEMI)	Heparin + GP IIb/IIIa inhibitor rather than bivalirudin alone	Non-CABG-related bleeding, 1-year mortality
AF						
Pisters, et al. 2010[24]	A novel user-friendly score (HAS-BLED) to assess 1-year risk of major bleeding in patients with atrial fibrillation	Euro Heart Survey	AF (3,978)	Hypertension, abnormal renal / liver function, stroke, bleeding, labile INR, advanced age, drugs or alcohol		Major bleeding
Lip et al. 2011[21]	Comparative validation of a novel risk score for predicting bleeding risk in anticoagulated patients with atrial fibrillation	SPORTIF	AF (7,329)	Concurrent aspirin use, renal impairment, advanced age, diabetes, heart failure or left ventricular dysfunction		Major bleeding

Baseline and treatment predictors of increased bleeding risk in ACS, AF or PCI

PCI						
Nikolsky et al. 2007[23]	Development and validation of a prognostic risk score for major bleeding in patients undergoing percutaneous coronary intervention via the transfemoral approach	REPLACE-1, REPLACE-2	PCI (7,058)	Advanced age, female sex, renal impairment, anemia	LMWH within 48 h pre-PCI, GP IIb/IIIa inhibitors, intraaortic balloon pump use	Major bleeding
Mrdovic et al. 2013[22]	Simple risk algorithm to predict serious bleeding in patients with ST-segment elevation myocardial infarction undergoing primary percutaneous coronary intervention	RISK-PCI, ART-PCI	PCI (3,057)	Female sex, peptic ulcer, renal impairment, anemia, heart failure		
Mehran et al. 2011[4]	Impact of bleeding on mortality after percutaneous coronary intervention	RESPONSE2, ACUITY, HORIZONS-AMI	Primary PCI (17,034)	Female sex, advanced age, renal impairment, elective PCI / ACS, NSTEMI / STEMI with biomarkers, elevated WBC, current cigarette smoking	Heparin + GP IIb/IIIa inhibitor compared with bivalirudin monotherapy; bivalirudin + GP IIb/IIIa inhibitor with bivalirudin monotherapy	Major TIMI bleeding within 30 days of PCI
Généreux et al. 2015[5]	Incidence, predictors, and impact of post-discharge bleeding after percutaneous coronary intervention	ADAPT-DES	PCI with DES (8,582)	Advanced age, peripheral artery disease, lower baseline Hb levels, lower platelet reactivity on clopidogrel	Discharge on warfarin, treatment of heavily calcified lesions and bifurcations	Post-discharge bleeding

Identifying HBR patients

Physicians in the AP region should use a systematic approach to identify potential HBR patients undergoing PCI.

Suitable assessment items may include:

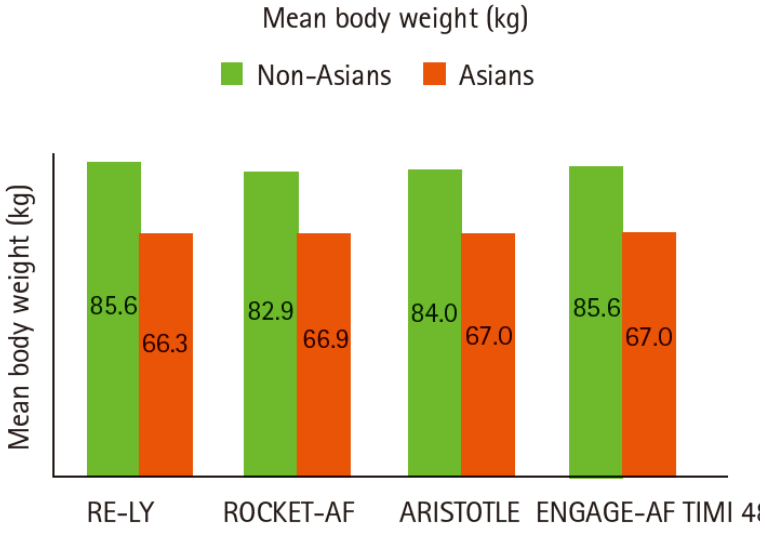
- ***Age ≥75 (± assessment of ADL / frailty)***
- ***Low BMI (< 20 kg/m^2)***
- ***Anticipated invasive procedure or surgery in next 3 to 6 months***
- ***Current oral anticoagulation***
- ***Recent bleeding (within previous 2 months)***
- ***Renal impairment (eGFR < 30 mL/min per 1.73 m^2)***
- ***Anemia (hemoglobin [Hb] < 9 g/dL or recent drop in Hb)***

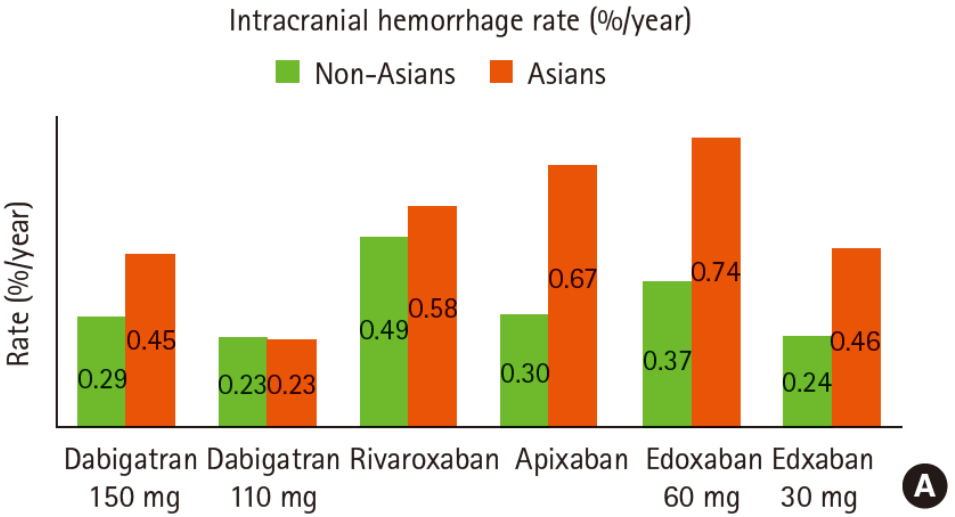
Periprocedural techniques and practices

Among HBR patients undergoing PCI, use of the following are recommended:

- ***Transradial** approach in preference to the transfemoral approach.*
- ***Newer-generation DES** in preference to BMS.*
- ***Single-stent** approaches for bifurcation lesions rather than complex, dual stenting techniques.*
- ***PPIs**, especially in patients with a history or previous gastrointestinal bleeding.*

Non-Asians vs. Asians





Bang OY et al. Journal of Stroke 2016;18(2):169-178

Antithrombotic therapy in HBR patients I

Antithrombotic therapy in HBR patients undergoing PCI should generally be administered in line with European ESC and US ACCF / AHA recommendations.

Specific guidance for HBR patients:

- ***Avoid preloading with antiplatelet therapy (eg, clopidogrel) in stable CAD patients undergoing elective PCI identified with HBR.***
- ***Dual antiplatelet therapy should be kept to a short duration (generally a minimum of 1 month to standard of 6 months) depending on the indication.***
- ***Platelet function testing should not be routinely used to guide antithrombotic therapy.***

Antithrombotic therapy in HBR patients II

Based on limited evidence that suggests Asian patients are at higher risk of bleeding than non-Asian patients, the following additional points should be considered:

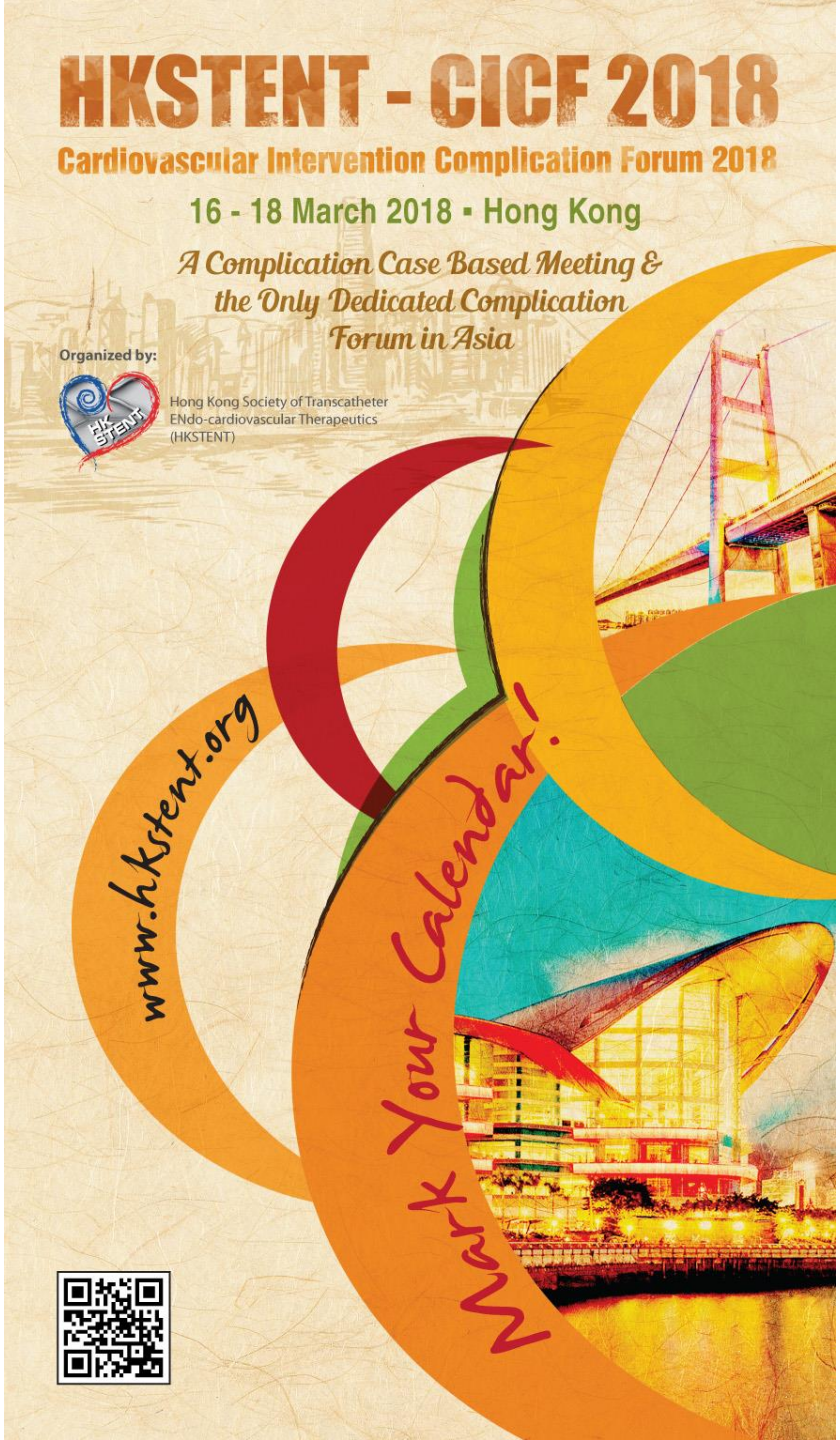
- ***Oral anticoagulation with NOAC is generally preferable to warfarin but should be used at the lowest effective dose.***
- ***Warfarin dose should be adjusted to a lower INR level (typically 1.8-2.0) than that commonly used for non-Asian patients.***
- ***Consideration may also need to be given to recombinant proteins and LMWH (eg, enoxaparin) derived from porcine sources in predominantly Muslim countries.***

Multidisciplinary Bleeding Team

A multidisciplinary approach, including members from surgical, anesthesiology, hematology, and cardiology disciplines should be used to make decisions on the optimal timing of procedures and antithrombotic therapy in HBR patients who require surgery in the post-PCI period.

Conclusions

- ***Importance of idenfying HBR patients***
- ***Hospital- & Country-specific HBR registries***
- ***Peri-PCI considerations – approach, stent, technique***
- **Antithrombotic therapy – special consideration for Asian patients**
- **Multidisciplinary Bleeding Team approach**



HKSTENT-CICF

17 – 18 March 2018
Hong Kong

Welcome you all!

For updates, please visit:
www.hkstent.org

14th AiCT

ASIAN INTERVENTIONAL CARDIOVASCULAR THERAPEUTICS

THE OFFICIAL CONGRESS OF APSIC

7-9th September 2018

Hong Kong

Convention and Exhibition Centre (HKCEC)

www.aict-congress.com

asia PCR

Thank you for your attention!


PCR