

- patients presenting without persistent ST-segment elevation: the Task Force for the management of acute coronary syndromes (ACS) in patients presenting without persistent ST-segment elevation of the European Society of Cardiology (ESC). *Eur Heart J* 2011;**32**:2999–3054.
18. Brauer R, Smeeth L, Anaya-Izquierdo K, Timmis A, Denaxas SC, Farrington CP, Whitaker H, Hemingway H, Douglas I. Antipsychotic drugs and risks of myocardial infarction: a self-controlled case series study. *Eur Heart J* 2015;**36**: 984–992.
 19. Perk J, De Backer G, Gohlke H, Graham I, Reiner Z, Verschuren M, Albus C, Benlian P, Boysen G, Cifkova R, Deaton C, Ebrahim S, Fisher M, Germano G, Hobbs R, Hoes A, Karadeniz S, Mezzani A, Prescott E, Ryden L, Scherer M, Syvanne M, Scholte op Reimer WJ, Vrints C, Wood D, Zamorano JL, Zannad F. European Guidelines on cardiovascular disease prevention in clinical practice (version 2012). The Fifth Joint Task Force of the European Society of Cardiology and Other Societies on Cardiovascular Disease Prevention in Clinical Practice (constituted by representatives of nine societies and by invited experts). *Eur Heart J* 2012;**33**:1635–1701.
 20. Aavik E, Lumivuori H, Leppänen O, Wirth T, Häkkinen S-K, Bräsen J-H, Beschornier U, Zeller T, Braspenning M, van Criekinge W, Mäkinen K, Ylä-Herttuala S. Global DNA methylation analysis of human atherosclerotic plaques reveals extensive genomic hypomethylation and reactivation at imprinted locus 14q32 involving induction of a miRNA cluster. *Eur Heart J* 2015;**36**:993–1000.
 21. Santovito D, Egea V, Weber C. DNA methylation and epigenetics: exploring the terra incognita of the atherosclerotic landscape. *Eur Heart J* 2015;**36**: 956–958.

CARDIOVASCULAR FLASHLIGHT

doi:10.1093/eurheartj/ehu477

Online publish-ahead-of-print 16 December 2014

Silent myocardial infarction and stroke: findings of multimodality imaging

Masanori Taniwaki, Stephan Windecker, and Lorenz Räber*

Department of Cardiology, Swiss Cardiovascular Center Bern, Bern University Hospital, Bern 3010, Switzerland

* Corresponding author. Email: lorenz.raeber@insel.ch

A 32-year-old male presented with acute onset of global aphasia and right hemiplegia. Emergent CT angiography demonstrated acute occlusion of the left internal carotid artery. The patient underwent angiography of the carotid arteries (Panel A) and after mechanical thrombectomy symptoms improved. Serial ECGs were normal. Transthoracic (TTE) and transoesophageal echocardiography (TEE) revealed no cardiac thrombi. Coagulability, lipid profile (Cholesterolin 4.63 mmol/L, LDL-C 2.74 mmol/L), and cardiac enzymes were normal. The only risk factor was smoking (8 pack-years). A cardiac MRI revealed a small thrombus in the left ventricular (LV) apex measuring 0.9×1.8 mm (Panels B and C, arrowhead), apical wall thinning (Panel C, arrow), and dyskinesia (LV ejection fraction 58%), suggesting a myocardial infarction (MI) of undetermined age. Coronary angiography revealed a hazy lesion in the proximal segment of the left anterior descending artery (Panels D and E). Optical coherence tomography (OCT) to clarify the underlying lesion morphology disclosed a recanalized lesion with a 'multi-channel' appearance (Panels F–H). The lesion was successfully treated by implantation of a drug-eluting stent and the patient discharged with clopidogrel, rivaroxaban, statin, and ACE-inhibitor. Upon more detailed history, the patient reported crescendo angina pectoris in the preceding months.

Occult cardiac embolism is considered a principal mechanism of cryptogenic stroke. Thrombus formation within the LV cavity is a potential complication of MI. Cardiac MRI has the highest sensitivity to detect LV thrombi and should be considered in the work-up of patients with highly suspicious cardiac origin of stroke and negative standard examinations. Optical coherence tomography may be useful to fully characterize the morphology of coronary culprit lesions.

