with bpAMC (4) toward a diagnostic tool with potential for CMR-based diagnosis of myocarditis in individual patients. The extent of myocardium with abnormal T2 times above 7.6% identifies bpAMC with a diagnostic accuracy of >90%. The prognostic meaning of elevated T2 in terms of functional recovery remains to be determined.

Florian Bönner, MD
Maximilian Spieker, MD
Sebastian Haberkorn, MD
Christoph Jacoby, PhD
Ulrich Flögel, PhD
Bernhard Schnackenburg, PhD
Patrick Horn, MD
Petra Reinecke, MD
Mirja Neizel-Wittke, MD
Malte Kelm, MD
Ralf Westenfeld, MD*

*Department of Medicine
University Hospital Duesseldorf, Medical Faculty
Division of Cardiology, Pulmonology and Vascular Medicine
Moorenstrasse 5
D-40225 Düsseldorf
Germany
E-mail: ralf.westenfeld@med.uni-duesseldorf.de
http://dx.doi.org/10.1016/j.jcmg.2015.11.014

REFERENCES

1. Friedrich MG, Sechtem U, Schulz-Menger J, et al. Cardiovascular magnetic resonance in myocarditis: a JACC white paper. J Am Coll Cardiol 2009;53:1475–87.

2. Hinojar R, Foote L, Arroyo UE, et al. Native T1 in discrimination of acute and convalescent stages in patients with clinical diagnosis of myocarditis: a proposed diagnostic algorithm using CMR. J Am Coll Cardiol Img 2015;8:37–46.

3. Thavendiranathan P, Walls M, Giri S, et al. Improved detection of myocardial involvement in acute inflammatory cardiomyopathies using T2 mapping. Circ Cardiovasc Imaging 2012;5:102–10.

4. Bohnen S, Radunski UK, Lund GK, et al. Performance of T1 and T2 mapping cardiovascular magnetic resonance to detect active myocarditis in patients with recent-onset heart failure. Circ Cardiovasc Imaging 2015;8: e003073.

5. Bonner F, Janzarik N, Jacoby C, et al. Myocardial T2 mapping reveals age- and sex-related differences in volunteers. J Cardiovasc Magn Reson 2015;17:9.

Illustration of the Resorption Process Between 2 Different Overlapping Bioresorbable Scaffolds

A 65-year-old man with stable angina underwent percutaneous coronary intervention with a 3.0 × 18-mm bioresorbable scaffold (BRS) type 1 (DESolve, Elixir Medical Corp., Sunnyvale, California) in the mid-left anterior descending artery, followed by a 2.5 × 28-mm BRS type 2 (Absorb, Abbott Vascular, Santa Clara, California) to cover a distal edge dissection because another BRS type 1 could not pass distally. The final angiographic result was excellent (Figures 1A and 1B).

After 10 months, the patient presented with a recurrence of his anginal symptoms and underwent repeat coronary angiography. There was angiographic evidence of a significant restenosis at the overlapping site and throughout the BRS type 1 (Figure 1C). Optical coherence tomography (OCT) was performed and revealed significant neointimal hyperplasia at the sites. Furthermore, multiple overhung struts (discontinuities or strut fractures) were observed in BRS type 1; however, no discontinuity was present with BRS type 2 (Figures 1D to 1H).

Several types of BRS are in development (1), of which BRS type 1 and type 2 are the first 2 BRSs approved by the Conformité European mark for use in coronary artery disease. They have different bioresorption times: BRS type 2 completely resorbs within 3 years and BRS type 1 within 2 years. Late discontinuity is considered part of the normal bioresorption process (2) and is presumed to occur at different times as resorption rates vary between BRSs.

In this case, OCT was not performed at the index procedure; therefore, we were unsure whether the overhung struts were late discontinuities or strut fractures formed at the index procedure. If the latter is true, this could account for the difference in restenosis between the 2 types of scaffold. Furthermore, the overlapping site developed the most severe in-scaffold restenosis, which suggests that overlapping current-generation BRS, which have very thick struts, should be avoided and preference given to an abutting scaffold to scaffold strategy.

This case uniquely illustrates the differences in resorption process between the 2 commercially available BRS implanted in the same vessel.

Akihito Tanaka, MD*
Richard J. Jabbour, MD
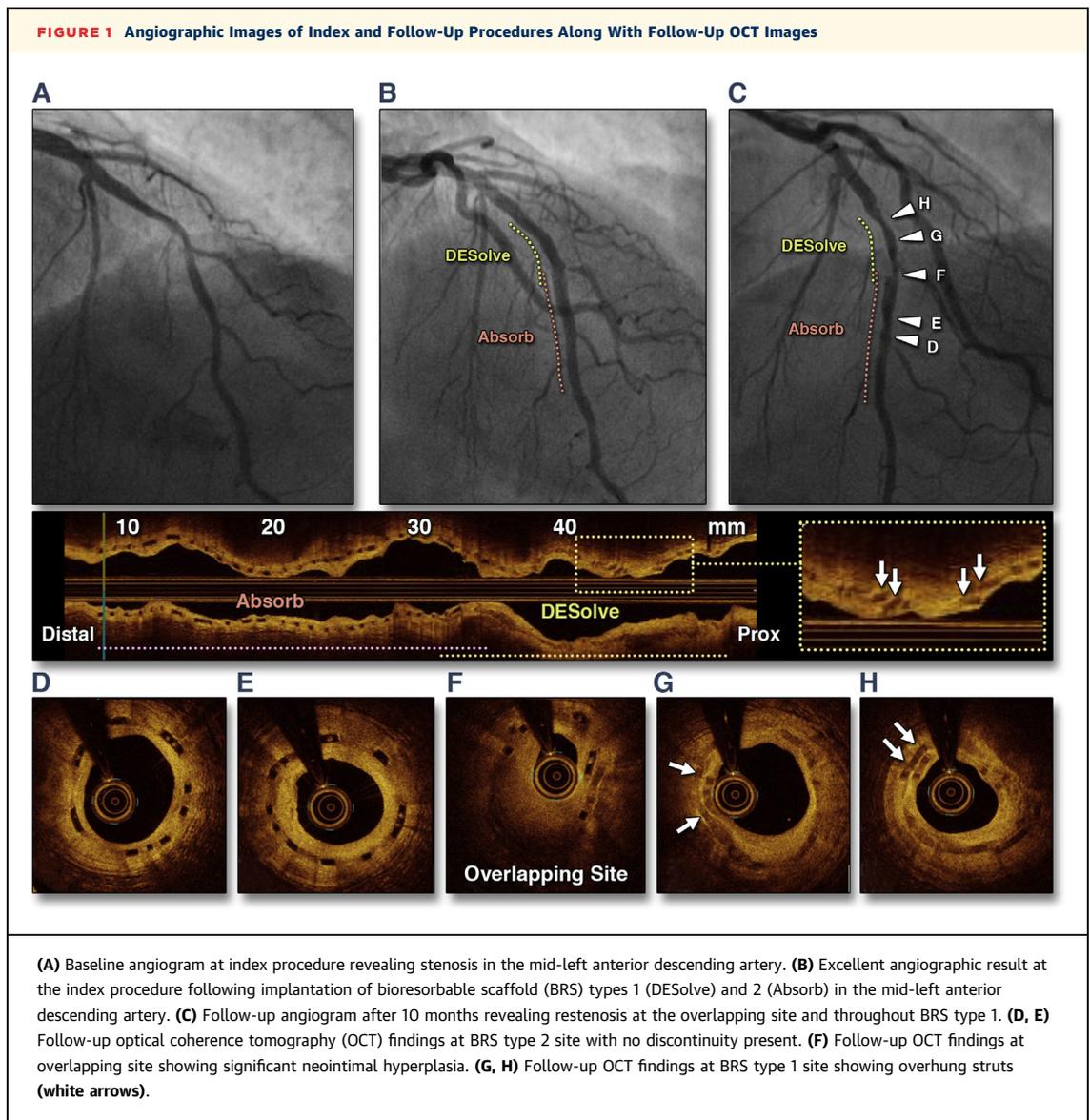Hiroyoshi Kawamoto, MD
Azeem Latib, MD
Antonio Colombo, MD

*EMO-GVM Centro Cuore Columbus
48 Via M. Buonarroti
20145 Milan
Italy
E-mail: info@emocolumbus.it
http://dx.doi.org/10.1016/j.jcmg.2015.12.013

FIGURE 1 Angiographic Images of Index and Follow-Up Procedures Along With Follow-Up OCT Images

(A) Baseline angiogram at index procedure revealing stenosis in the mid-left anterior descending artery. **(B)** Excellent angiographic result at the index procedure following implantation of bioresorbable scaffold (BRS) types 1 (DESolve) and 2 (Absorb) in the mid-left anterior descending artery. **(C)** Follow-up angiogram after 10 months revealing restenosis at the overlapping site and throughout BRS type 1. **(D, E)** Follow-up optical coherence tomography (OCT) findings at BRS type 2 site with no discontinuity present. **(F)** Follow-up OCT findings at overlapping site showing significant neointimal hyperplasia. **(G, H)** Follow-up OCT findings at BRS type 1 site showing overhung struts **(white arrows)**.

REFERENCES

1. Wiebe J, Nef HM, Hamm CW. Current status of bioresorbable scaffolds in the treatment of coronary artery disease. J Am Coll Cardiol 2014;64: 2541–51.

2. Onuma Y, Serruys PW, Muramatsu T, et al. Incidence and imaging outcomes of acute scaffold disruption and late structural discontinuity after implantation of the absorb Everolimus-Eluting fully bioresorbable vascular scaffold: optical coherence tomography assessment in the ABSORB cohort B Trial (A Clinical Evaluation of the Bioabsorbable Everolimus Eluting Coronary Stent System in the Treatment of Patients With De Novo Native Coronary Artery Lesions). J Am Coll Cardiol Intv 2014;7:1400–11.

Association Between Sedentary Time and Coronary Artery Calcium

Habitual sedentary behavior has been associated with incident cardiovascular disease, regardless of physical activity (1). However, there are currently no published data on the relationship between objectively measured sedentary behavior and coronary artery calcium (CAC), and increased subclinical atherosclerosis may represent an additional mechanism through which sedentary behavior influences cardiovascular (CVD) risk. We sought to investigate the association between accelerometer measured sedentary behavior and CAC using data from the Dallas Heart Study (DHS).

The DHS is a longitudinal, multiethnic population-based probability sample of Dallas County residents, with oversampling of black individuals to ensure approximately 50% of black and nonblack participants. Details of the study design and recruitment procedures have been previously described (2).