- 16 Przyklenk K, Darling CE, Dickson EW, et al. Cardioprotection 'outside the box'-the evolving paradigm of remote preconditioning. Basic Res Cardiol
- 17 Kharbanda RK, Peters M, Walton B, et al. Ischemic preconditioning prevents endothelial injury and systemic neutrophil activation during ischemiareperfusion in humans in vivo. Circulation 2001;103:1624–30.
- 18 Kharbanda RK, Mortensen UM, White PA, et al. Transient limb ischemia induces remote ischemic preconditioning in vivo. Circulation 2002;106:2881-3.
- 19 Gabay C, Kushner I. Acute-phase proteins and other systemic responses to inflammation. N Engl J Med 1999;340:448–54.
- 20 Erbel R, Heusch G. Coronary microembolisation—its role in acute coronary syndromes and interventions. Herz 1999;24:509-14.
- Ridker PM. Clinical application of C-reactive protein for cardiovascular disease detection and prevention. *Circulation* 2003;107:363–9.
 Ridker PM, Buring JE, Cook NR, et al. C-reactive protein, the metabolic syndrome, and risk of incident cardiovascular events: an 8-year follow-up of 14 719 initially healthy American women. *Circulation* 2003;107:391–7.
- 23 Pearson TA, Mensah GA, Alexander RW, et al. Markers of inflammation and cardiovascular disease: application to clinical and public health practice. A statement for healthcare professionals from the Centers for Disease Control and Prevention and the American Heart Association. Circulation 2003:107:499-511.
- 24 James SK, Armstrong P, Barnathan E, et al. Troponin and C-reactive protein have different relations to subsequent mortality and myocardial infarction after acute coronary syndrome: a GUSTO-IV substudy. J Am Coll Cardiol

- 25 Heeschen C, Hamm CW, Bruemmer J, et al. Predictive value of C-reactive protein and troponin T in patients with unstable angina: a comparative analysis. CAPTURE Investigators. Chimeric c7E3 AntiPlatelet Therapy in Unstable angina REfractory to standard treatment trial. J Am Coll Cardiol
- 26 Toss H, Lindahl B, Siegbahn A, et al. Prognostic influence of increased fibrinogen and C-reactive protein levels in unstable coronary artery disease. FRISC Study Group. Fragmin during Instability in Coronary Artery Disease. Circulation 1997;**96**:4204–10.
- Skyschally A, Gres P, Heusch P, et al. Preinfarction angina: no interference of coronary microembolisation with acute ischemic preconditioning. J Mol Cell Cardiol 2005;**39**:355–61.
- 28 Drzewiecka-Gerber A, Drzewiecki J, Wita K, et al. Prognostic value of troponin I after elective percutaneous coronary interventions. *Kardiol Pol* 2004;**61**:117–26; discussion 126.
- Heusch G, Schulz R. Remote preconditioning. J Mol Cell Cardiol 2002:34:1279-81.
- Harkin DW, Barros D'Sa AA, McCallion K, et al. Ischemic preconditioning before lower limb ischemia-reperfusion protects against acute lung injury. J Vasc Surg 2002;35:1264-73.
- 31 Herrmann J, Lerman A, Baumgart D, et al. Preprocedural statin medication reduces the extent of periprocedural non-Q wave myocardial infarction. Circulation 2002:106:2180-3.
- 32 Loukogeorgakis SP, Panagiotidou AT, Broadhead MW, et al. Remote ischemic preconditioning provides early and late protection against endothelial ischemia-reperfusion injury in humans: role of the autonomic nervous system. J Am Coll Cardiol 2005;46:450-6.

IMAGES IN CARDIOLOGY.....

doi: 10.1136/hrt.2006.088468

Percutaneous treatment of trisaccular coronary aneurysm with coil-embolisation

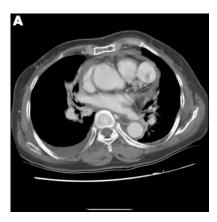
49-year-old woman underwent cardiac evaluation because of severe chest pain and diaphoresis. Physical examination revealed a regular heart rate of 64 beats/min and a blood pressure of 60/30 mm Hg. Echocardiography and computed tomography (CT) of the patient's chest identified moderate amounts of pericardial effusion and the round mass as a large aneurysm of the coronary artery (panel A). An emergency pericardiocentesis was performed immediately to alleviate the haemodynamic

derangement. To delineate the size and location of the aneurysm, coronary angiography was performed (panel B). This revealed that the coronary artery fistula originated from the proximal left anterior descending artery, and was connected to the trisaccular aneurysm draining into the pulmonary artery. The aneurysm had a calcified wall and also contained swirling contrast with laminated thrombus.

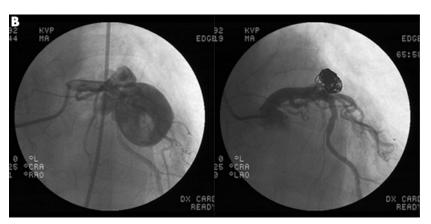
Using the guidewire, the Guglielmi Detachable Coil (GDC, Hemostasis) was advanced and deployed into the first, proximal aneurysm. Then, six additional GDCs had to be placed and the flow of the coronary artery fistula was successfully closed.

After the coil embolisation, a followup angiogram of the fistula with aneurysm was obtained one week later. This showed successful obliteration of the left anterior descending artery fistula with aneurysm.

> H Kim, H Park hspark@mail.knu.ac.kr



Computed tomographic scan showing pericardial effusion and a large aneurysm containing low density material-like thrombus.



Left: Coronary angiography shows the coronary-to-pulmonary fistula from the proximal left anterior descending coronary artery with a large trisaccular aneurysm. Right: Repeat angiography shows the coil embolisation and complete sealing of the aneurysm.



Percutaneous treatment of trisaccular coronary aneurysm with coil-embolisation

H Kim and H Park

Heart 2006 92: 1826

doi: 10.1136/hrt.2006.088468

Updated information and services can be found at: http://heart.bmj.com/content/92/12/1826

These include:

Email alerting service

Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Notes

To request permissions go to: http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to: http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to: http://group.bmj.com/subscribe/