Coronary aneurysm after drug-eluting stent implantation

A 50-year-old hypertensive female with a diagnosis of anterior-wall non-ST elevation myocardial infaction underwent a coronary angiogram which showed a critical stenosis of ostial left anterior descending (LAD) artery with plaque in the distal left main (LM). The left circumflex (LCX) and right coronary arteries were normal with a right dominant circulation. A zotarolimus-eluting stent (ZES; Endeavour, Medtronic Vascular, Santa Rosa, California) 4.0×24 mm in size was successfully deployed from distal LM to proximal LAD in a stent crossover strategy jailing the ostial LCX. The stent was postdilated with a 4.5×13 mm non-compliant balloon at high pressures. The patient was discharged on dual antiplatelet therapy. Ten months post-procedure, she presented with new-onset angina. Despite counselling for check angiogram, she refused consent for the same. A 64-slice computed tomographic (CT) angiogram revealed an occluded stent with a filling defect suggestive of a coronary aneurysm in the mid part of the stent (figures 1A–C). Following positive findings of restenosis with associated coronary artery aneurysm patient was subsequently taken up for conventional coronary angiography to better delineate the coronary anatomy (figure 1D). The patient underwent successful coronary-artery bypass grafting. Development of coronary artery aneurysms (CAN) after DES implantation is rare. The combination of physical trauma induced by stent implantation with high-pressure postdilatation with a non-compliant balloon and specific biological reactions after DES implantation may be the contributing factors for coronary aneurysm formation after DES implantation in this case.

Shiv Bagga, Yash Paul Sharma, Kewal K Talwar

Correspondence to Shiv Bagga; shivbagga@gmail.com

Competing interests None.

Provenance and peer review Not commissioned; not externally peer reviewed.

Heart Asia 2011;37. doi:10.1136/ha.2011.003970

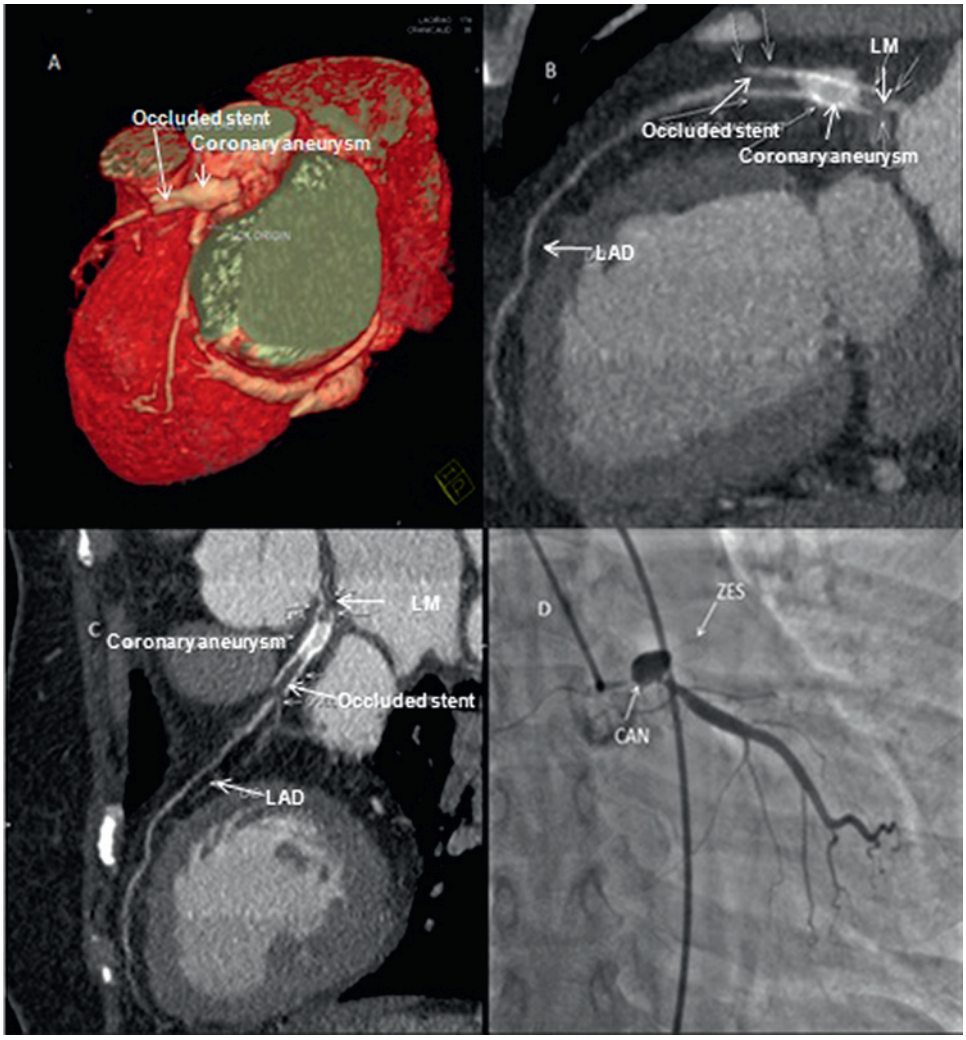

Figure 1