Giant mycotic coronary aneurysm associated with late stent infection

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A 67-year-old man with a history of paclitaxel-eluting stent implantation in the right coronary artery (RCA) 4 years previously needed below-the-knee amputation of the right leg due to uncontrollable foot infection. The patient had acute high fever and leukocytosis, and performed repeatedly transthoracic echocardiography (TTE) to rule out infective endocarditis. TTE revealed the presence of a mass (4.7 × 3.4 cm) (head arrows) adjacent to the sinus of Valsalva (Panel A). A giant pseudoaneurysm (5.1 × 3.7 cm) (head arrows) at the proximal site of the stent (arrows) was confirmed by the cardiovascular computed tomography (CCT; Panel B) and also a three-dimensional volume rendered CCT image (Panel C). The angiography in the left anterior oblique projection showed contrast agent extravasation into a giant mycotic pseudoaneurysm (arrows) (Panel D). We performed emergent surgery to decrease the risk for acute rupture since the mycotic pseudoaneurysm progressed rapidly in 2 weeks. An intraoperative image showed the pseudoaneurysm after opening and aspiration of the cavity (head arrows), and the stent removed from the RCA (arrow) (Panel E). Haematoxylin–eosin stain (×250) showed only fibrous tissue without normal arterial walls and the presence of inflammation with accumulation of neutrophils and cocci (Panel F).

Coronary stent infection is a rare complication, but it is associated with high mortality. Late stent infection may be caused by drug-eluting stent (DES)-related local problems (delayed endothelialization of the stent struts, inhibition of neointimal growth, late acquired incomplete stent apposition, and coronary aneurysm formation). These local reactions to the DES may provide a nidus for stent infection during an episode of bacteremia.

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