Negative results - Valves

Aortic valve lesion after coronary angiography

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Abstract

A 56-year-old patient admitted to hospital for the suspicion of an acute coronary syndrome underwent coronary angiography without detection of significant lesions. Seven days later the echocardiography showed acute severe aortic valve insufficiency. Intraoperatively we found a perforated leaflet probably due to lesion during transcatheter procedure.

Keywords: Aortic valve lesion; Complication of coronary angiography; Acute coronary syndrome

We report on a 56-year-old patient who was admitted to hospital for the suspicion of an acute coronary syndrome. He was dialyzed for terminal renal insufficiency for one year. The transcatheter coronary angiogram showed a 50% lesion of the left coronary artery and a 50–70% stenosis of the diagonal branch, there was no stenosis of the right coronary artery that was dominant. An evaluation of the myocardial fractional flow reserve was performed and not significant. The patient was treated conservatively. Seven days later the patient suffered again from chest pain. A new cardiac murmur systolic–diastolic was found and a slight orthopnea. The transthoracic echocardiography showed a severe acute aortic valve insufficiency. A probable prolapse was described. Surgical intervention was recommended. We found a perforated non-coronary leaflet from the Aranzio node to the implantation base of the leaflet (Fig. 1). No vegetation was found. The aortic valve was changed for a mechanical valve (ATS® 23 mm) as the lesion was too big to be considered as repairable. The histopathological examination showed a fragment of the aortic valve with acute or subacute inflammation focally ulcerated with granulation tissue which seemed to be compatible with acute or subacute endocarditis. Nevertheless, the patient showed no further symptoms to argue for an endocarditis but a chronic process cannot be totally excluded. The microbiological analysis remained negative.

Postoperatively the patient had peritonitis without detection of microorganism but he recovered well and could be discharged two weeks later.

Literature reports 3.3% incidence of aortic valve lesions after high-frequency catheter ablation [1], mostly due to catheter manipulations rather than due to tissue injury, however, aortic valve perforation is an extremely rare complication after percutaneous coronary intervention [2]. This case report should remind us that any interventional procedure, even the most common and apparently safe, can cause severe complications. Vogel et al. reported a case of perforation of the right aortic valve cusp as a complication of ventricular septal defect closure with a modified Rashkind umbrella [3].
In conclusion, we would recommend the importance of physical examination after coronary angiography to exclude the onset of cardiac murmurs.

References

