Mega-giant coronary aneurysm: antithrombotic therapy is an option

Vincent Spagnoli,[1] Raphael Dautry,[2] Jean Guillaume Dillinger,[1] Patrick Henry[1]

[1]Department of Cardiology, Lariboisière Hospital, Paris, Île-de-France, France
[2]Department of Radiology, Lariboisière Hospital, Paris, Île-de-France, France

Correspondence to
Patrick Henry,
patrick.henry@aphp.fr

Accepted 30 July 2017

A 69-year-old man with a history of hypercholesterolaemia presented to the emergency department with atypical chest pain. Physical examination was normal and ECG showed no evidence of ischaemic changes. Laboratory studies were notable for a D-dimer level of 1842 ng/mL (reference value <500 ng/mL) and the troponin I level was normal.

Chest X-ray was normal. Chest CT angiography ruled out a pulmonary embolism but showed a giant and extensive aneurysm of the right coronary artery (RCA) up to 45 mm in diameter with a partly thrombosed lumen and evidence of right ventricle compression on four-chamber view (figures 1 and 2). The volume of the aorta and the RCA appeared similar (figure 3). Doppler echocardiography did not demonstrate right or left heart haemodynamic abnormalities.

Diagnostic coronary angiography showed atheroma and ectasia on the left descending coronary artery and the circumflex. Linked to the very large lumen, the cannulation of the RCA was difficult and the coronary flow appeared slow and very turbulent (figure 4).

Symptoms at presentation resolved and cardiac MRI showed no evidence of myocardial infarction. There were no other aneurysm locations, especially in cerebral arteries or descending aorta.

Complications of coronary aneurysm include compression, rupture, embolisation or thrombosis, and treatment is not consensual.[1 2] Due to these risks, an interventional approach with surgery or percutaneous coronary intervention was considered but was refused by the patient.

Because of persistent elevation of D-dimer at 1 month (1590 ng/mL), an evidence of coagulation activation process probably related to the aneurysm, oral anticoagulation, rather than antiplatelet therapy, could represent the antithrombotic therapy of choice in such cases and was prescribed to the patient. Ten months after the diagnosis and

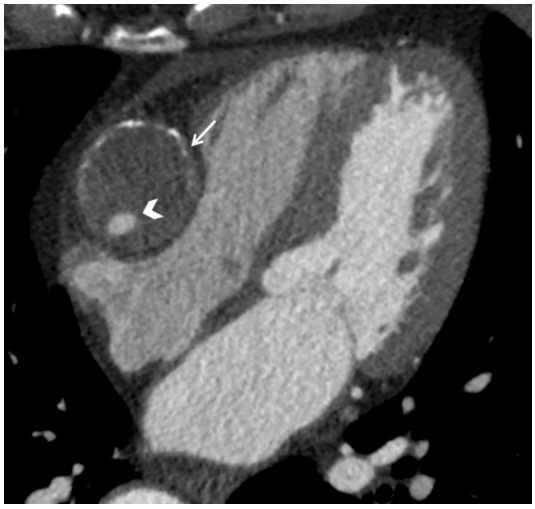

Figure 2 Coronary CT angiography in four-chamber view showing right ventricule compression; evidence of external diameter with arrow and coronary lumen with head arrow.

Figure 1 Coronary CT angiography in four-chamber view, evidence of external diameter with arrow and coronary lumen with head arrow.

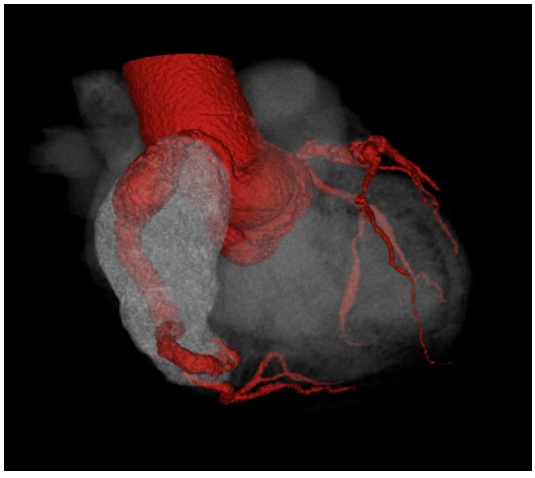

Figure 3 Volume rendering reconstruction of the heart, aorta and the right coronary aneurysm; coronary lumen appears in red.

To cite: Spagnoli V, Dautry R, Dillinger JG, *et al*. *BMJ Case Rep* Published Online First: [*please include* Day Month Year]. doi:10.1136/bcr-2017-220950

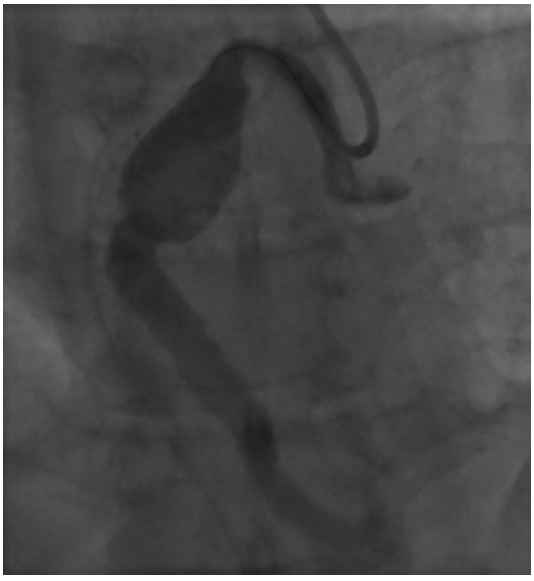

Figure 4 Coronary angiography of the right coronary artery with slow and turbulent flow.

initiation of medical therapy, the patient was asymptomatic and did not experience complication.

Learning points

- There are no data reported in the literature regarding treatment and indication of surgical or percutaneous management for such aneurysms.
- Medical treatment could be considered in such case.
- No comparison between medical therapy and interventional approach has been made.
- There are no data regarding the best medical therapy (antiplatelet vs anticoagulation therapy).

Contributors VS, JGD, RD and PH contributed to the planning, conduct and report of the work describe in this article. VS and PH are responsible for the overall content.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

1 Al Attar N, Sablayrolles JL, Nataf P. Giant atherosclerotic aneurysm of the left anterior descending artery. *J Thorac Cardiovasc Surg* 2003;126:888–90.
2 Cereda AF, Tiberti G, Pera IG, *et al*. A Giant Coronary Artery Aneurysm Treated Using Multiple Overlapping Covered Stents. *JACC Cardiovasc Interv* 2017;10:e127–8.