CASE REPORT

Giant coronary aneurysm presenting as a cardiac mass on transthoracic echocardiogram

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SUMMARY

A 69-year-old man with a history of ischaemic heart disease and previous stent implantation in the right coronary artery (RCA) was found to have a large well-encapsulated mass attached to the right atrium on a routine transthoracic echocardiogram. Subsequent investigations including transoesophageal echocardiography and CT coronary angiogram suggested an RCA aneurysm formation in relation to the prior stented segment, further confirming on coronary angiogram a large ectatic vessel with a giant aneurysm measuring 2.4×2.7 cm. Giant coronary artery aneurysms are rare and here we present interesting images of a case initially picked up on transthoracic echocardiography.

BACKGROUND

'Giant' coronary artery aneurysm is defined as an aneurysm with a diameter more than 2 cm, and is a rare occurrence. We present an interesting case of such aneurysm initially picked up on a routine transthoracic echocardiography.

CASE PRESENTATION

A 69-year-old man with a history of non-ST elevated myocardial infarction (NSTEMI) treated with a

bare-metal stent (4.5 mm×16 mm) in the distal right coronary artery (RCA) 4 years ago, presented for routine follow-up echocardiogram. On the study, he was noted to have a well encapsulated mass attached to lateral wall of the right atrium (RA). A subsequent transoesophageal echocardiography revealed 2.3×2.7 cm heterogenous, vascular mass with multiple attachments to RA free wall and septal wall adjacent to the coronary sinus ([figure 1](#)). A CT coronary angiogram (CTCA) was also performed which demonstrated an aneurysm formation with the neck starting just proximal to the stented segment ([figure 2](#)).

A coronary angiogram was then arranged. This showed a large ectatic RCA vessel with aneurysmal segments in mid-RCA. Distal RCA stent before the bifurcation was patent with a large aneurysm measuring 2.4×2.7 cm. There was a focal 50–60% lesion just proximal to the stent.

This patient was managed conservatively and remains well at 2-year follow-up.

DISCUSSION

A coronary artery aneurysm is defined as coronary dilation which exceeds the diameter of normal

Figure 1 Transthoracic echocardiogram of the giant right coronary artery aneurysm presenting as a right atrial mass (A). Transoesophageal echocardiographic images depicting 2.4×2.6 cm mass (B). Blood flow on colour Doppler (C). Deep tissue imaging (D).

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Figure 2 Coronary angiography (A) and CT coronary angiography (B) of the giant right coronary artery aneurysm.

adjacent segments by 1.5 times and the incidence varies from 1.5% to 5%.¹ An aneurysm with a diameter more than 2 cm is termed as 'giant aneurysm' with a reported incidence of 0.02%, only a few cases have been described in the literature.^{2 3} Aetiology may be atherosclerotic, related to stent implantation, or secondary to autoimmune disease such as Kawasaki's or Takayasu disease. Possible complications can include aneurysm rupture, thrombosis and acute coronary syndrome.¹ Optimal management is unknown though cases describing surgical, percutaneous or conservative approaches have been described.^{1 2}

Learning points

- ▶ Giant coronary artery is rare and may be atherosclerotic, related to stent implantation, or secondary to autoimmune disease such as Kawasaki's or Takayasu disease.
- ▶ Giant coronary artery may present as asymptomatic mass or acute coronary syndrome.
- ▶ Optimal management is unknown though cases describing surgical, percutaneous or conservative approaches have been described.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

REFERENCES

- 1 Syed M, Lesch M. Coronary artery aneurysm: a review. *Prog Cardiovasc Dis* 1997;40:77–84.
- 2 Jha NK, Ouda HZ, Khan JA, *et al.* Giant right coronary artery aneurysm—case report and literature. *J Cardiothorac Surg* 2009;4:18.
- 3 Li D, Wu Q, Sun L, *et al.* Surgical treatment of giant coronary artery aneurysm. *J Thorac Cardiovasc Surg* 2005;130:817–21.

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