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Anomalous high origin of right coronary artery above the sinotubular junction: rarely diagnosed anomaly

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DESCRIPTION

A 28-year-old man was admitted with clinical signs of severe aortic regurgitation with left ventricular hypertrophy, which was later confirmed by ECG, transthoracic and transoesophageal echocardiography. There was no evidence of vegetations on any valves, root abscess, fistulas, myocardial abscess or purulent pericarditis. Coronary angiography was not contemplated in view of young age. The patient was taken up for aortic valve replacement surgery under general anaesthesia after proper investigations.

After midline sternotomy, we found dilated right coronary artery (RCA) originating anomalously high from the ascending aorta (figure 1). On aortotomy, right coronary ostium was not found at the normal place in the right coronary sinus but the RCA origin was abnormally high and above the sinotubular junction (displaced vertically and laterally). Tricuspid calcified aortic valve was excised and replaced by a mechanical prosthetic valve. Aortotomy

incision was closed carefully in two layers taking care to avoid being close to the dilated RCA origin (figure 2). Post cardiopulmonary bypass recovery was smooth. There was no evidence of ischaemia in the right coronary territory. He was discharged on the seventh day.

Coronary artery anomalies result from disorders that take place during the third week of fetal development.¹ Coronary anomalies are classified as significant or major, which are those that cause myocardial perfusion disorders, and non-significant or minor, which are those in which the coronary flow is normal. Significant anomalies have a low incidence and account for 0.25–0.9% of congenital heart diseases. For this reason, alterations in the coronary flow caused by these anomalies and their clinical significance remain unknown.^{2 3}

As described, this anomaly is of no haemodynamic significance but creates problems during engagement of an angiographic catheter,³ but this is a rare finding during operation.

Figure 1 Anomalous high origin of dilated right coronary artery (marked by arrow) above the sinotubular junction on the ascending aorta (photograph taken from the right-hand side of patient).

Figure 2 Photograph taken after closure of aortotomy; the box area indicates anomalous right coronary artery origin and the arrows point to the suture line away from the anomalous origin of the right coronary artery (photograph taken from the head end side of patient).

Competing interests None.

Patient consent Obtained.

REFERENCES

1. **Angelini P.** Coronary artery anomalies: an entity in search of an identity. *Circulation* 2007;**115**:1296–305.

2. **Angelini P.** Coronary artery anomalies—current clinical issues: definitions, classification, incidence, clinical relevance, and treatment guidelines. *Tex Heart Inst J* 2002;**29**:271–8.
3. **Popma JJ.** Coronary arteriography and intravascular imaging. In: Libby P, Bonow RO, Mann DL, Zipes DP, Braunwalds E, eds. *Braunwald's Heart disease: A Text Book of Cardiovascular Medicine*. Philadelphia, PA: Elsevier 2008:488.

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