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A rare congenital combination

Uma rara combinação congênita

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Figure 1. Coronary angiography showing separate ostium origin of all three major coronary arteries from the right coronary sinus.

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A 61-year-old female patient was referred to the cardiology department for dyspnea upon exertion. A transthoracic echocardiogram showed a severely stenotic bicuspid aortic valve and normal ejection fraction in both ventricles. She was submitted to a routine preoperative coronary angiography. A right radial access was obtained. Despite numerous efforts, it was not possible to visualize the origin of the left main coronary artery at the left ostium. Catheterization of right coronary artery was done and demonstrated a normal implantation at the right sinus. Surprisingly, the left anterior descending artery (LAD) as well as the left circumflex artery (LCx) ostia were found at the right sinus, and were separated with an absent left main coronary artery. No other abnormalities were found on angiography.

Congenital coronary artery anomalies are relatively uncommon. However, separate ostium origin of all three major coronary arteries from the right coronary sinus is a very rare congenital anomaly, with an estimated prevalence of 0.008%.^{1,2} The clinical significance of this anomaly depends on the coronary artery affected, particularly LAD, and is associated with sudden cardiac death, when the interarterial course is between the aorta and pulmonary artery.² Though coronary abnormalities have been described in association with bicuspid aortic valve, to our knowledge this is the first case to describe bicuspid aortic valve, absence of the left main coronary artery, and separate ostia of LAD and LCx from the right coronary sinus. Recognizing the

anomalous origin of the coronary arteries prior to heart surgery is of great importance for avoiding damage to the aberrant vessel.

Written informed consent for publication of clinical details and/or clinical image was obtained from a relative of the patient.

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None.

CONFLICTS OF INTEREST

The authors declare there are no conflicts of interest.

CONTRIBUTION OF AUTHORS

Conception and design of the study: CCO, CGB e JC; data collection: CCO e JC; data interpretation: CCO, CGB e JC; text writing: CCO; approval of the final version to be published: CCO, CGB e JC.

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