Original Research Paper





BENTALL OPERATION IN A PATIENT WITH A SINGLE CORONARY ARTERY ANOMALOUS

Ibrahim Cagri KAYA

MD, Eskisehir City Hospital, Department Of Cardiovascular Surgery, Eskisehir, 26080, Turkey.

KEYWORDS: coronary anomaly; single coronary artery

Single coronary artery (SCA) anomaly is defined as the supply of the entire myocardium from single coronary ostium originating from a sinus of valsalva. SCA anomaly is very rare and is usually diagnosed incidentally during coronary angiography. It has been reported at a rate of 0.04% in diagnostic angiography series, and it has been reported to occur in 3% of all coronary anomalies (1). Although it is usually asymptomatic, there are rare cases with chest pain, arrhythmia, syncope, myocardial infarction and even sudden cardiac death (2). We present our patient with bicuspid aortic valve and SCA anomaly, who underwent modified bentall de bono operation for ascending aortic aneurysm and aortic valve regurgitation. In our patient, the left anterior descending (LAD) and left circumflex artery (LCx) arise separately from a common trunk originating from the right sinus of valsalva. Due to this feature, we argue that there is no other bentall case defined in this group in the literature.

A 39-year-old female patient was admitted to the cardiology clinic with the complaint of dyspnea. Aortic root and ascending aortic aneurysm accompanied the bicuspid aorta. Coronary angiography revealed that the right coronary artery, left anterior descending artery, and circumflex artery emerged from a single root and from the right coronary ostium (figure 1).



Figure 1. Preoperative Coronary Angiography

During the surgery, the right coronary ostium (single coronary ostium, figure 2) was prepared in the form of an islet. 21 no Medtronic Open Pivot valve was sutured to 32 mm dacron graft to get a valved conduit and the standart bentall operation was performed.



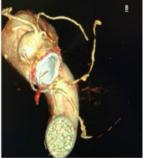


Figure 2. Postoperative Coronary Ct Angiography

Single coronary artery anomaly is defined as the supply of the entire myocardium from single coronary ostium originating from a sinus of valsalva (3). SCA anomaly is very rare and is usually diagnosed incidentally during coronary angiography. It has been reported at a rate of 0.04% in diagnostic angiography series, and it has been reported to occur in 3% of all coronary anomalies. Although it is usually asymptomatic (4). Our patient belongs to the group of lipton RIII and rigatelli class III, with the left anterior descending (LAD) and left circumflex artery (LCx) arising separately from a common trunk originating from the right sinus of valsalva.

REFERENCES

- Sampath, A., Chandrasekaran, K., Venugopal, S., Fisher, K., Reddy, K. N., Anavekar, N. S., & Bansal, R. C. (2020). Single coronary artery Left (SCA L)-Right coronary artery arising from mid-left anterior descending coronary artery: New variant of Lipton classification (SCA L-II) diagnosed by computed tomographic angiography. Echocardiography, 37(10), 1642-1645.
- Olguda, A. A. A., Arterden, S. S. Ö. İ., & Arter, K. A. S. K. (2012). Anomalous
 Origin of the Right Coronary Artery from the Left Anterior Descending
 Coronary Artery in a Patient with Ascending Aortic Aneurysm.
- Neiva, J., Silva, M. P., Pires-Morais, G., Dias, A., Ponte, M., Caeiro, D., ... & Ribeiro, V. (2019). Right single coronary artery as an incidental finding in Takotsubo syndrome and acute heart failure: Case report and review of the literature. Revista Portuguesa de Cardiologia, 38(3), 215-223.
- Rigatelli G, Docali G, Rossi P, et al. Validation of a clinical significance-based classification of coronary artery anomalies. Angiology. 2005;56:25---34.