

RIGHT CORONARY ARTERY ORIGINATING FROM THE LEFT CORONARY SINUS: A RARE CORONARY ARTERY ANOMALY

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Anomalous origin of the right coronary artery (RCA) from the left coronary sinus is a rare congenital anomaly. Here, we report a case of a 54-year-old symptomatic woman who was admitted with a history of unstable angina pectoris, hypertension, coronary arteriosclerosis, diabetes mellitus, hypercholesterolemia and previous coronary bypass operation (CABG). Coronary angiography was performed and a right coronary artery was discovered, which was seen to arise from the left coronary sinus.

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Key words: right coronary anomaly, congenital.

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ПРАВАЯ КОРОНАРНАЯ АРТЕРИЯ, ПРОИСХОДЯЩАЯ ИЗ ЛЕВОГО КОРОНАРНОГО СИНУСА: РЕДКАЯ АНОМАЛИЯ КОРОНАРНОЙ АРТЕРИИ

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Аномальное отхождение правой коронарной артерии (RCA) из левого коронарного синуса — редкая врожденная аномалия. Здесь, мы сообщаем о случае 54-летней женщины, которая была госпитализирована с нестабильной стенокардией, гипертонией, коронарным атеросклерозом, сахарным диабетом, гиперхолестеринемией и предыдущими операциями аортокоронарного шунтирования (АКШ) в анамнезе. При коронарной ангиографии правой коро-

нарной артерии было обнаружено, что она восходит из левого коронарного синуса.

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Ключевые слова: правая коронарная аномалия, врожденный.

Introduction

The incidence of coronary artery anomalies has been reported to be between 0.2% to 1.3% in angiographic series and 0.3% in autopsy series [1]. Most anomalies are not of clinical significance. However, some anomalies are related to angina, dyspnoea, syncope, acute myocardial infarction and sudden death [2]. In spite of the fact that in the past, an anomalous origin of the RCA from the left sinus of Valsalva was considered a benign finding, it is now evident that this anomaly can be associated with atypical chest pain, myocardial ischemia, and sudden death [3].

Here, we present a 54-year-old woman with an anomalous right coronary artery which arose from the left coronary sinus. In addition, this woman had a previous history of having undergone a coronary artery bypass grafting operation due to multi-vessel disease 7 years ago.

Case report

A 54-year-old woman with a prior history of hypertension and hypercholesterolemia, myocardial infarction and CABG operation presented to our hospital. On admission, her blood pressure was 130/80 mmHG, with a regular pulse rate of 73/bpm. ECG showed normal sinus rhythm and negative T waves on V4–6. We performed coronary angiography due to the presence of unstable angina pectoris. Angiography demonstrated a normal left main coronary artery (LMCA), severe stenosis in the mid portion of the Left anterior descending artery (LAD), mild stenosis in proximal segment of the circumflex artery (CX), and

the LIMA_LAD graft to be totally occluded, and a right coronary artery was discovered, which was observed to arise from the left coronary sinus, coursing to the right side of the heart (Fig. A, B, C).

Discussion

The incidence of coronary artery anomalies has been reported between 0.6% to 1.3% in angiographic series and 0.3% in autopsy series [4]. The inter-arterial course of the LCA, between the aortic root and the pulmonary artery trunk, correlates with a higher incidence of angina, syncope and sudden death [5]. The anomalous origin of LCA from the right sinus of Valsalva is not always associated with symptoms of angina pectoris. Other anatomical variants including a retro-aortic course of the anomalous LCA, a right ventricle-free wall course and a septal course, along the floor of the right ventricle, are considered benign [6]. In our case, a right coronary artery was discovered that was seen to have arisen from the left coronary sinus. The ideal imaging tool for the diagnosis and delineation of coronary artery anomalies is coronary angiography. Other imaging modalities include computed tomography, magnetic resonance imaging and transesophageal echocardiography. In our case, at first, we could not identify the right coronary artery and hence, we performed aortography. We realized that the right coronary artery was originating from the left coronary sinus. Then, we performed selective angiography and demonstrated the origin of the RCA from the upper portion of the left coronary sinus. Anomalous coro-

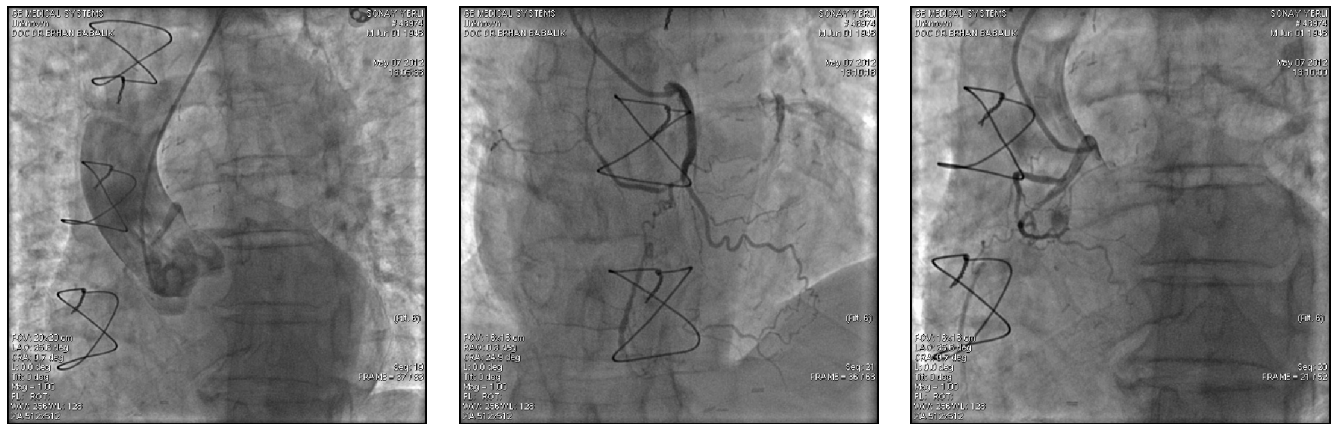


Figure 1

nary arteries do not appear to be associated with an increased risk of development of coronary atherosclerosis, but some patients with anomalous coronary arteries have symptoms of angina pectoris due to atherosclerosis [7]. Recently another case reported with anomalous origin of

right coronary artery from the left coronary sinus which resulted with sudden death and successful surgical reimplantation [8]. Aortography and selective coronary angiography should both be well evaluated in patients with anomalies of the coronary artery.

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