Coronary Artery Fistula Causing Angina

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Coronary artery fistula is a rare congenital coronary artery anomaly, but it can cause typical chest pain in the setting without significant coronary artery stenosis. Herein, we demonstrated a case of coronary artery fistula with abnormal ²⁰¹thallium perfusion scan – steal phenomenon. She presented with typical chest pain, but the coronary angiography only revealed a coronary artery fistula drained into pulmonary artery. In the meanwhile, the coronary artery is patent. This case reminds the clinicians coronary artery fistula should be considered as one of the differential diagnosis of chest pain.

Key words: coronary artery fistula, angina

Introduction

There is a wide variety of congenital coronary artery anomalies, and congenital fistula of the coronary communicating with one of the cardiac chamber or great vessels is one of the most common anomalies¹. Although most of the coronary artery fistula are congenital, this clinical entity can rarely developed after cardiac surgery or chest trauma²⁻⁴. Bland-White-Garland syndrome, defined as anomalous origin of the left coronary artery from the pulmonary artery, is the most common type of them. Herein, we demonstrated a typical presentation of coronary artery fistula with abnormal ²⁰¹thallium perfusion scan.

Case Report

A 60-year-old woman presented with chest tightness and shortness of breath for months and the frequency of episodes had been increasing during this period. She had the history of diabetes mellitus, hypertension, and hyperlipidemia. Physical examinations, including cardiac auscultation, were unremarkable. Laboratory examinations, including cardiac enzyme, and chest radiography did not show any abnormalities. Dipyridamole ²⁰¹thallium perfusion scan revealed mixed reversible and irreversible perfusion defect involving the anterior wall of left ventricle (Fig. 1A), which might imply the coronary steal phenomenon from the coronary artery fistula. Coronary angiography showed patent coronary arteries and confirmed a fistula originated from the middle portion of left coronary artery and drained into pulmonary artery (Fig. 1B). After conservative medical treatment, she lived uneventfully during follow-up one-year period.

Discussion

Coronary artery fistula is rare anomaly which is present in 0.002% of the general population,