Coronary artery disease due to familial hypercholesterolaemia – a case report

Maja Štrajtenberger*, Vanja Nedeljković, Marina Božan

Special Hospital for Pulmonary Diseases, Zagreb, Croatia

KEYWORDS: coronary artery disease, familial hypercholesterolemia, proprotein convertase subtilisin/kexin type 9 inhibitor.

CITATION: Cardiol Croat. 2022;17(9-10):171. | https://doi.org/10.15836/ccar2022.171

***ADDRESS FOR CORRESPONDENCE**: Maja Štrajtenberger, Specijalna bolnica za plućne bolesti, Rockefellerova ul. 3, HR-10000 Zagreb, Croatia. / Phone: +385-91-5278-100 / E-mail: dr.strajs@gmail.com

ORCID: Maja Štrajtenberger, https://orcid.org/0000-0001-5379-9846 • Vanja Nedeljković, https://orcid.org/0000-0003-0781-0148 Marina Božan, https://orcid.org/0000-0003-1920-6538

Background: Coronary artery disease is s significant cause of mortality and morbidity worldwide. It occurs due to reduced blood flow through coronary arteries, most commonly due to atherosclerotic plaque. Clinically, it presents as angina pectoris, acute coronary syndrome, or sudden cardiac death. Diagnosis is made upon patient's history, ECG, ergometry and coronarography. It is essential to recognize and treat risk factors such as hypercholesterolemia, obesity, physical inactivity, smoking, or underlying diseases as diabetes.

Case report: 34-year-old obese man came to our infirmary due to exercise induced chest discomfort and pain which would resolve upon rest after 3-4 minutes. His family history is significant for familial hypercholesterolemia and his father's sudden death at the age of 44. Five months prior to our exam he did 24-hour holter ECG and thyroid ultrasound which showed no abnormalities. Carotid ultrasound revealed minor atherosclerotic plaques along ACC and on bifurcations. MSCT coronarography described insignificant to borderline stenosis of LMCA and insignificant stenosis of LAD, Cx, RCA. Due to elevated values in lipid panel, he was administrated with combination therapy rosuvastatin and ezetimibe. For further evaluation we did an echocardiography which showed all measures within reference values, 24-hour blood pressure monitor which revealed underlying hypertension, and exercise stress test which was interrupted due to chest pain and inferolateral ST-segment depression. Invasive coronarography was done (6 months after the first one) which depicted LMCA subocclusion, so the patient was accepted for urgent cardiovascular procedure – a double bypass was done (LIMA-LAD, LRA-OM1). He is treated due to recently published guidelines for ischemic heart disease and high lipid management.[1]

Follow up: Patient underwent rehabilitation process, has no precordial discomfort upon physical effort with ergometry proven significant physical tolerance improvement. Due to unsatisfying lipid regulation, the therapy was escalated with proprotein convertase subtilisin/kexin type 9 inhibitor. Patient failed to reduce his body weight, as well as his lifestyle changes and eating habits, so many risk factors still represent a challenge for further management and prevention.

RECEIVED:
November 4, 2022

ACCEPTED:
November 10, 2022

LITERATURE

1. NHS England. Summary of national guidance for lipid management for primary and secondary prevention of CVD. Available from: https://www.england.nhs.uk/aac/wp-content/uploads/sites/50/2020/04/Summary-of-national-guidance-for-lipid-management-for-primary-and-secondary-prevention-of-cardiovascular-disea.pdf (November 3, 2022).