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Case Report

A Comprehensive Approach to the Diagnosis and Treatment of Chronic Coronary Syndrome

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Abstract

Coronary artery disease (CAD) is a chronic progressive disease with social significance, result of obstructive or non- obstructive atherosclerotic plaque accumulation in the epicardial arteries. CAD is one of the leading causes for deterioration in quality of life and cardiovascular mortality. CAD has dynamic character and its major clinical presentations are: acute coronary syndromes / STEMI, NSTEMI, UA/ and chronic coronary syndromes. In this case report we present the treatment algorithm in patient with chronic coronary syndrome: from optimal medical therapy, through objective methods of examination leading to the decision for interventional treatment and the importance of regular follow-up.

Keywords: chronic coronary syndrome; cardiovascular mortality; echocardiography

Introduction

Coronary artery disease (CAD) is a chronic progressive disease with social significance, result of obstructive or non- obstructive atherosclerotic plaque accumulation in the epicardial arteries. CAD is one of the leading causes of deterioration in quality of life and cardiovascular mortality. CAD has dynamic character and its major clinical presentations are: acute coronary syndromes / STEMI, NSTEMI, UA/ and chronic coronary syndromes. In this case report we present the treatment algorithm in patient with chronic coronary syndrome: from optimal medical therapy, through objective methods of examination leading to the decision for interventional treatment and the importance of regular follow-up.

Chronic coronary syndrome has various clinical presentations[1]:

1. patients with suspected CAD and "stable" anginal symptoms, and/or dyspnea;
2. patients with new onset of heart failure (HF) or left ventricular (LV) dysfunction and suspected CAD;
3. asymptomatic and symptomatic patients with stabilized symptoms <1 year after an ACS or patients with recent revascularization;
4. asymptomatic and symptomatic patients >1 year after initial diagnosis or revascularization;
5. patients with angina and suspected vasospastic or microvascular disease;
6. asymptomatic subjects in whom CAD is detected at screening.

Clinical case

The following clinical case represents a comprehensive approach to diagnosis and treatment of patient with chronic coronary syndrome. A 61-year old male who presents with angina during minimal physical exertion. He has been diagnosed with coronary artery disease since 2017 when he was admitted in hospital with unstable angina. A coronary angiogram was performed and revealed significant stenosis of RCAm and borderline stenosis of LADp. The RCA stenosis has been intervened with implantation of one SES /SESx1/2.25/13mm/16atm/with optimal angiographic result. The patient is taking dual antiplatelet therapy, beta blocker, ACE inhibitor, calcium antagonist, statin and insulin. He has been asymptomatic for two years until now, when he presents with stable angina grade III CCS.

Figure 1: Echocardiography on admission

All laboratory findings are normal, as is rest ECG. Echocardiogram shows normal left ventricular function, no significant valve lesions.

Based on these findings a HEART TEAM took the decision to optimize patient's therapy by adding nitrate and trimetazidine. Two months later the patient presents with improved symptoms, but persisting angina during physical exertion.

Based on patient's clinical presentation and risk factors: gender, age, hypertension, diabetes, smoking, dyslipidemia, prior revascularization and according to most recent guidelines on Chronic Coronary Syndromes [2,3] a SPECT was performed as non- invasive method for detection of myocardial ischemia. During the examination the patient didn't show typical angina, but there were signs of hypoperfusion in the territory of LAD. Because of present stable angina grade IIICCS

anddespite being on optimal medical ant-ischemic therapy and the presence of induced myocardial ischemia during SPECT - after discussion a Heart Team decided to perform coronary angiogram with invasive evaluation of LAD stenosis.

The procedure revealed optimal result from the previous intervention and significant stenosis of proximal LAD that was treated with implantation of one SES (SES 3.5/19mm /14atm/. After the intervention the patient was stable, without angina. Three months later he presented with persistent fatigue and suboptimal control of blood pressure and heart rate. A change of therapy was made with higher doses of beta blocker and ACE inhibitor. Six months later the patient was asymptomatic, with optimal blood pressure and heart rate levels, reduced weight and optimal glycemic control.
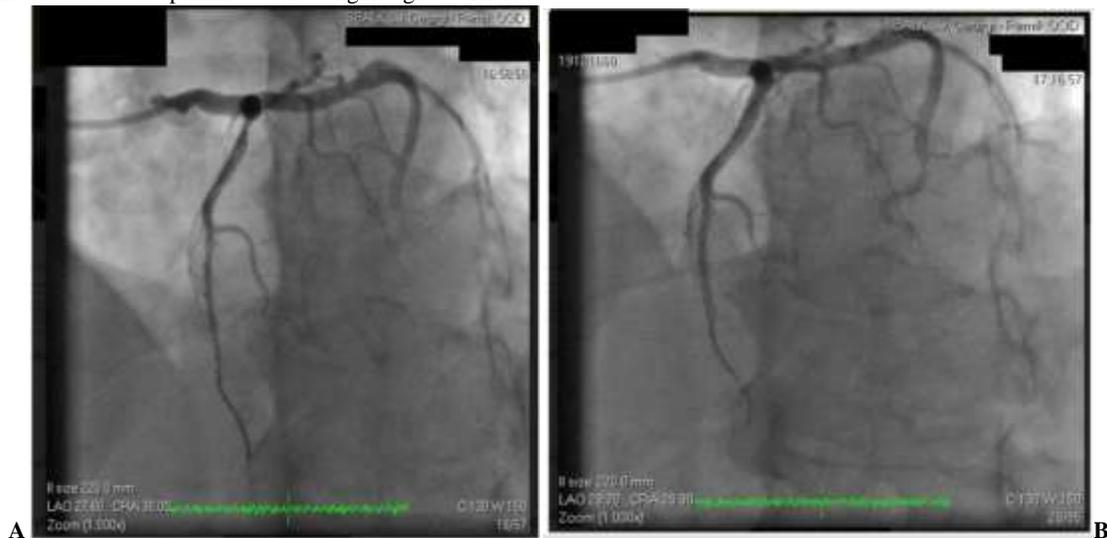
A- significant stenosis of LADp
B- PCI LADp (SES BioMime 3.5/19mm /14atm)

Chronic coronary syndrome has variety of clinical presentations. That's why there is a need for detailed clinical evaluation with comprehensive and individualized approach. It is of great significance to find the balance and according to guidelines to find the right strategy for every patient.

Conclusions:

Risk stratification plays a key role in the approach of chronic coronary syndromes as it defines the strategy- conservative or interventional. Based on the progressive and dynamic character of the disease a regular health check is of great importance.

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