A Case Report Of Angina After Coronary Artery Bypass Grafting: Coronary Artery Subclavian Steel Syndrome Complication

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Abstract: *An important syndrome is a coronary subclavian steal syndrome in which the subclavian artery indicates neurological features because of the backward flow in the vertebral artery. The surgical intervention of coronary artery bypass grafting (CABG) is affected due to coronary subclavian steel syndrome. Due to simultaneous stenosis of the subclavian artery that contraries the blood flow from the left anterior descending artery to the left internal mammary artery causing in myocardial ischemia. A 59 years gentleman was presented with the history of coronary artery bypass grafting (CABG) 05 years ago, and presented with complaint of recurrence angina. A procedure of (CT) computed tomography angiography of thorax, abdominal region and region of pelvis to find out perforation. Proximal subclavian stenosis was presented on computed tomography. Stenting of the subclavian artery is a helpful intervention for Coronary Subclavian Steel Syndrome and bring about of Coronary Subclavian Steel Syndrome features of the patient having variation in blood pressure measurements in upper arms.*

I. Introduction

Coronary Artery Bypass Grafting cause coronary artery subclavian steel syndrome (CSSS), a rare complication. CSSS is characterized by retrograde flow from the left internal memory artery (LIMA) to the left subclavian artery (SA) when a proximal left Subclavian artery **(**SA) stenosis is present[1] A distinctive case of an adult man who experienced CABG 5 years ago, he complained with sustained chest pain as well as heartburning with diaphoresis. On palpation pulses were irregular in both limbs. CSSS is not common complication caused by surgical intervention of cardiac bypass grafting [1]. The prevalence rate of subclavian artery stenosis (SAS) has two percent of general population [2]. Managing of recurrent angina is a challenge after revascularization of coronary artery,

II. Case Report

A 59 years gentle man presented with sudden chest pain on left side with palpitation and diaphoresis in the evening during walking. He had history of shortness of breath and tachycardia with chest pain. It was not relieved on rest and by nitroglycerin. Patient did not complain any other symptoms like headache, weakness, numbness, and claudication except dyspnea as well as restlessness. On physical examination, there was deference in blood pressure (BP) in the upper extremities, in the right limb blood pressure; 150/90 mm hg and in the left limb blood pressure was 85/50mm hg. On chest examination, bilateral crackles at bases of lungs. Patient was known case of diabetes mellitus, high blood pressure, and coronary artery disease. Surgical procedure CABG was performed in 2014 for treatment of unstable angina where LIMA was anastomosed with the diagonal artery and two autologous saphenous vein grafts to the right anterior descending and right coronary artery, there is evidence of 75 percent stenosis in the vein of left anterior descending. He was taking following medicines; tab. Doloprin, Noclot, probase, Lasoride, PCM.Moxiget and digoxin. There was history of smoking he smoked five cigarettes per day.

The jugular venous pressure was not raised and free from peripheral edema. In anterior leads ST segment elevated that was observed in electrocardiogram. Ejection fraction was 50%. After complete examination patient referred to emergency percutaneous transluminal coronary angioplasty. During angiography

the vein graft was completely occluded to the Left anterior descending (LAD) with clear thrombus formation and stenosis of proximal subclavian artery was found.

III. DSCUSSION

In general population, the prevalence of subclavian artery stenosis is around 2 percent, 7 percent in high risk population of peripheral artery disease. CSSS complication is about 0.2 to 6.8 % occurs after CABG intervention.[3] The treatment with left internal mammary artery (LIMA) to bypass LAD graft for the revascularization of upper extremity [4]

In 1974 CSSS was defined first time so, reflected as not common therefore, CSSS is a complication in which the flow of blood is reversing mode from the coronary artery to LIMA. This occurs because of narrowing of the subclavian artery that interferes in blood flow. Because of insufficient oxygen supply in the coronary artery can causing myocardial ischemia. Our patient presents recurrent angina, ventricular tachycardia and ischemic cardiomyopathy [2]. Atherosclerosis is the most common cause of stenosis. Risk factors of subclavian artery stenosis are diabetes myelitis, hypertension, peripheral diseases and smoking. Our patient has all these risk factors CABG is beneficial. To diagnose the CSSS by Doppler ultrasound, computed tomography angiogram (CTA), Magnetic Resonance Imaging, therefore coronary angioplasty is a gold- slandered as it has the competency to find forceful reversing blood flow [4]

The risk of atherosclerosis can be decreasing by using aspirin, statin, beta blockers, calcium channel blockers used for the treatment of angina and sublingual nitrates can be used for prompt treatment. Absolute intervention includes percutaneous balloon angioplasty, stent therapy and bypass [5] This study revealed that stenting in subclavian artery with patients of subclavian stenosis is safe and beneficial [4]. Current treatment options for CSSS include endovascular or surgical revascularization. The endovascular approach with percutaneous transluminal angioplasty (PTA) and peripheral stenting has been considered first line treatment for SA stenosis and has many advantages including a minimally invasive approach, shorter hospital stay, less morbidity, and avoidance of general anesthesia compared to surgical bypass techniques [6] Initial success rates of PTA/stenting for SA stenosis have been 100% in multiple studies compared to more variable outcomes with SA occlusions, with a maximum success rate of 82.1% and minimum of 47% [7]

IV. Conclusion

It is concluded that percutaneous transluminal angioplasty (PTA) and peripheral stenting has been considered first line treatment for SA stenosis Patients who have experienced CABG intervention because of recurrence angina indicate to suspicious CSSS. This case presented in an emergency for the treatment of subclavian artery defect due to CSSS. Physical examination helps in noticing basilar syndrome.

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