EMERGENCY CORONARY BYPASS OPERATION ON THE ANGIOGRAPHY A CASE REPORT

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Hastanemiz Kardiyoloji kliniğinde gerçekleştirilen izole sağ koroner arter stent işlemi sonrası koroner arter perforasyonuna bağlı kardiyak tamponat ve ventriküler fibrilasyon gelişen olguya cerrahi olarak müdahale edildi. Kardiyak tamponadı giderilen hasta ventriküler fibrilasyondan çıkamaması nedeniyle kardiyopulmoner bypass eşliğinde Sağ koroner artere safen ven ile aortakoroner bypass yapıldı. Sorunsuz pompadan çıkılan hasta postoperatif altıncı günde taburcu edildi.

Anahtar Kelimeler: Acil koroner bypass, Stent

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INTRODUCTION

Since interventional cardiologic procedures became widespread, frequency of the intervention related complications has increased. The most common encountered complications are coronary artery dissection, coronary artery occlusion, and coronary artery perforation. In these situations, transferring the patient from cardiac catheter lab to the operation room may not be possible. Coronary bypass surgery on the catheter table is a life-saving procedure in such cases.

CASE

A 56 year old male patient admitted to Cardiology department of our hospital with chest pain complaint. He was describing effort dyspnea for 2-3 months. Effort test was positive. Coronary angiography showed 100 % occlusion in proximal segment of right coronary artery. Left anterior descending artery (LAD) and circumflex artery (Cx) were normal (Picture 1). Percutaneous transluminal coronary angioplasty PTCA - stent intervention to the right coronary was decided in the second stage.

Patient was taken to angiography room and occluded segment of the right coronary artery could not be passed by 0,014 guide wire and 8F guiding catheter. The patient was started to deteriorate. Hypotension and tachycardia developed. Ventricular fibrillation was defibrillated several times. Cardiovasculary surgery consultation was required due to suspicion of cardiac tamponade. Haemorragic fluid was aspirated with pericardiosynthesis. Hemodynamic situation of the patient was still being deteriorated. Because of the patieant's hemodynamic situations and inaccesable of the operation rooms, the operation was planned on the angiography table (Picture 2). CPB pump, surgical equipments, and anaesthesia device was carried to catheter laboratory. Median sternotomy was performed and cardiac tamponade was resolved after opening pericardium. Following the aspiration, a rupture and an epicaridal hematoma from proximal segment of the right coronary artery were determined. Patient was full heparinised and CPB was immediately started. Standart cannulation was performed. He was cooled by moderate hypothermia (28^0C). Cardiac arrest was carried out by aortic cross-clamp and antegrad cold blood cardioplegia. Aortocoronary bypass was performed to right coronary artery just before the bifurcation with a saphenous vein graft. Ruptured proximal segment of right coronary artery was repaired with 7/0 propylen suture material. After declamping of the aorta, proximal anastomosis was performed to ascending aorta with 6/0 propylen suture material. Weaning from the CPB was uneventful. Patient was transported to cardiovascular surgery intensive care unit after the operation. Intraaortic baloon pump was removed on postoperative 1st day. He was discharged from intensive care unit and hospital on postoperative 2nd and 6th days, respectively.

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DISCUSSION

Cardiovascular diseases are still the most common cause of deaths currently. The number of the PTCA approaches is increasing day by day, however this may lead to increase of complication frequency of this intervention. There are various rates in the literature between 0,32 % - 7 % for urgent coronary bypass demand after coronary angioplasty[1-2]. Mean part of these cases are acute coronary occlusion after PTCA-STENT intervention. Barakade et al. had performed urgent coronary bypass to 74 of 4146 (1,8 %) PTCA case. While 40 (54 %) of these cases had both acute arterial dissection and acute coronary occlusion; 34 (46 %) of them had only acute coronary artery occlusion without arterial dissection. Cardiopulmonary resuscitation was not reported in any case related to cardiac tamponade or coronary artery perforation[3]. Ischemia duration have critical importance in patients who need urgent coronary bypass[4]. In our case, we preferred to initiate CPB on angiography table due to unstable hemodynamic situation, no empty operating room, and to keep ischemic period shorter. According to classification of Ellis et al., a Class 3 perforation was determined[1]. Bleeding control with compression, suturing, ligation, and bypass to perforated area are possible options in such cases. Because of presenting diffuse hematoma around the perforated area, we decided to suture perforation area and make a bypass to distal of that area in our case. Literatures state that 63 % of Class 3 perforation cases need coronary bypass[1]. We performen the operation in angiography laboratory immediately to avoid prolong ischemia time. Thereby, optimal circumstances were provided for the operation and he was weaned from CPB after bypass very well.

Mortality in coronary bypasses which wasperformed after failed PTCA is significantly higher than elective cases. Furthermore, surgical mortality rates after fialed PTCA and combined with acute myocard infarction are 3,6% and 4,9% , respectively[5]. If cardiogenic shock is added to clinic course, mortality rate rises to 60 %[6].

PTCA is an intervention that always has mortal complication risk. Although coronary artery bypass in the angiography room must not be chosen routinely, in such an urgent circumstance it is a life-saving option when carried out by an experienced sugical team. We think that our case is of vital importance due to perform a coronary bypass operation with CPB on angiography table without mobilising the patient.

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