Hemolytic Anemia after Mitral Valve Repair: Case Report

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Abstract
Mechanical hemolytic anemia, although there is a well-known complication of mechanical valve replacement is reported to be rare after mitral valve repair. In this article, hemolytic anemia after mitral ring annuloplasty, undetectable improvement after repeated blood transfusions and tried to offer patients who underwent mechanical valve replacement.

Keywords
Hemolytic, Mitral, Ring, Valve

Introduction
Mechanical hemolytic anemia, although there is a well-known complication of mechanical valve replacement is reported to be rare after mitral valve repair. Mitral valve repair after the likely cause of hemolysis that occurs, the ring seam on the projecting bumps erythrocytes, free-moving court's whip movement, partial ring dehiscence (dehiscence), and reverse leakage current of the ring or plejit to, as a shock to the atrial wall of the central jet [1]. This case developed hemolytic anemia after mitral repair work was mechanical valve replacement. Rarity of these cases and would be useful to be submitted in order to emphasize the importance of redo surgery was considered successful.

Method
Which it is operated with a year ago due to mitral regurgitation and mitral valve repair; mitral P2 of the quadrangular resection, sliding annuloplasty, A2 of the court to transfer 31 mitral circular semirigid ring applied to 64-year-old male patient the last 2 months of effort during shortness of breath, was credited with increasing complaints of palpitations. Mechanical hemolytic anemia the diagnosis of hematologic consultations was made. Cases made laboratory admission to the hospital examination: increase Lactate Dehydrogenase (LDH), low hematocrit and hemoglobin, red blood cell shape and other hematologic data were normal. Increase in serum unconjugated bilirubin, increased bilirubin, increased urobilinogen excretion, serum haptoglobin absence, increased glycosylated hemoglobin, hemoglobinemia, hemoglobinuria, hemosiderinuria decreased serum levels were detected. Cases of liver and biliary tract MR cholangiographies normal, indirect Coombs was negative. Transthoracic echocardiography in patients with mitral valve regurgitation was detected in P2 (posterior leaflet). The annulus ring was found to be in normal anatomic position.

Left atrial diameter 4.6 cm, left ventricular end-diastolic diameter: 5.1 cm, left ventricular end-systolic diameters 3.8 cm, mitral valve area (Doppler): 2.6 cm² was measured. Mitral gradient was detected. Systolic pulmonary artery pressure was 35 mmHg, the tricuspid valve insuficieny; 1-2. Left ventricular ejection fraction was 60%. Coronary angiography and coronary arteries were normal. Mechanical diagnosed with hemolytic anemia and the resulting need for repeated blood transfusions increase LVED surgical cases with the decision taken.

Anesthesia premedication; the patient was given 5 mg oral diazepam the night before the operation. Operation 30 min. First, 10 mg of intramuscular diazepam was injected. Whether monitored patients in the operating room, ve...
nous and radial artery catheter inserted after induction of anesthesia Fentanyl is 30-50 mg/kg were. As a muscle relaxant pancuronium 0.1 mg/kg was used. Anesthesia was maintained with 3 mg/kg/min infusion of fentanyl was used for the inhalation of isoflurane as necessary. Through the internal jugular vein was implanted in the pulmonary artery catheter. Rectal probe was inserted for monitoring temperature during CPB to follow Foley urinary catheter and urine output during operation. Median sternotomy was achieved by applying the mediastinum. Severe pericardial adhesions were separated by blunt dissection. Meanwhile, the femoral artery was kept ready for emergency cannulation. Before cannulation 300-400 U/kg was heparinized with heparin Activated Clotting Time (ACT) has tried to keep over 450 sec. Arterial the ascending aorta, superior and inferior vena cava were placed double venous cannulation. Aortic root needle is placed. Vent cannula superior and inferior vena cava was placed double venous cannulation. Aortic root needle is placed. Vent cannula is pulled back into the right atrium. SVC cannula is pulled back into the right atrium. Aortic root needle is placed. Vent cannula is pulled back into the right atrium.

After the initiation of CPB systemic body temperature was lowered to 28-32°C. After putting aortic cross-clamp the aorta root isothermal blood cardioplegia (10 ml/kg initial dose) was administered. Between 23-28% hemocrit during cardiopulmonary bypass pump rate is 2.0-2.5 l/min/m², and mean arterial pressure of 50-80 mmHg was achieved so that the non-pulsatile perfusion, an anti grade l/min/m², and mean arterial pressure of 50-80 mmHg was achieved so that the non-pulsatile perfusion, an anti grade

Result

3 months in case of follow-up in all hematological parameters were provided outside the partial normalization of LDH height. General skin appearance, increased exercise capacity, dyspnea and improved color change in the sclera.

Discussion

Mechanical hemolytic anemia after mechanical valve surgery is one of those common complications. However, it is reported that in rare cases, in mitral valve repair. Mitral repair it is increasingly preferred over mitral valve replacement. In patients who were operated with mitral regurgitation due to mitral annular ring it is a must use. There is also an increasing use of many intracardiac suture with new prosthetic materials and technical reasons. This change is consider in the future may create more hemolysis [1].

Hemolysis after mitral valve annuloplasty is often seen in the first months following operation [2,3]. But late in the reported cases it is seen. In this case relatively uncommon symptoms during the first months after 10 month increasingly predominant. According to the deficiencies in the low level after mitral valve repair can cause hemolytic anemia. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve repair can cause hemolytic anemia. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve repair can cause hemolytic anemia. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement. In patients who were operated with mitral valve replacement.
transfusions were made and the complete recovery was not achieved. 31 no mechanical mitral valve replacement was performed in patients undergoing mitral valve repair other problems in a leaflet, the chordae, papillary muscles and the annulus fibrosis development risk. Fibrosis is caused by a loss of function by disrupting the lid cover mobility after surgery. This phenomenon made macroscopic and cellular pathological examination leaflet thickening, fibrosis, and especially the anterior leaflet chordae were observed for serious fibrotic and cellular proliferation. This diversity of crush syndrome mitral repair techniques, the chordae, leaflets were thought to be associated with the traction and milk.

Mitrval valve repair cannot be in the choice of cases is variable. Pregnancy is a contraindication for use antikoagulation, while in other cases the life expectancy of 10 years and six cases of bioprosthetic is preferred mechanical valve is a generally accepted understanding. In this case 64 years, good physical condition and mechanical valves due to be over 10 years of life expectancy were preferred.

Conclusion

The incidence of postoperative hemolysis in patients undergoing mitral valve repair using the public is more than the rate normally [6]. Clinically, mild cases can be monitored medically, but we believe that deep or recurrent symptomatic hemolytic anemia because of blood transfusions in patients requiring surgical intervention performed to cause hemolysis, which should eliminate the mechanism.

References