Aortic and mitral valve surgery with annular reconstruction for native valve endocarditis

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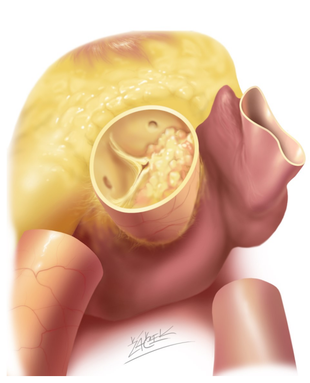
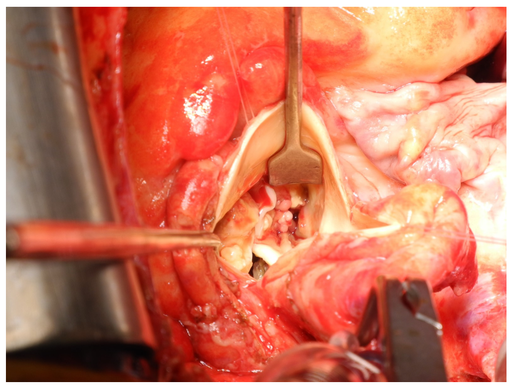
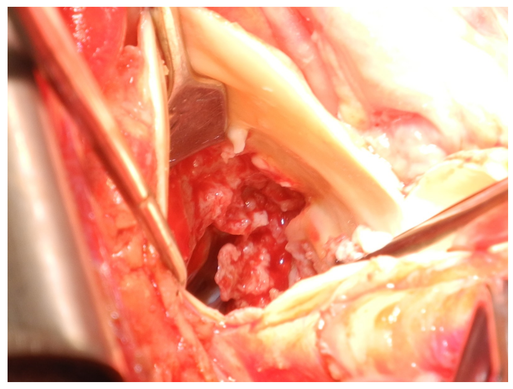
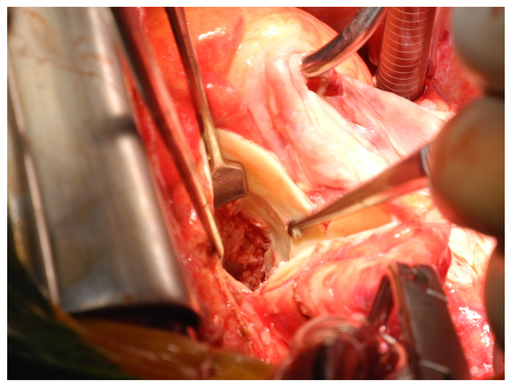
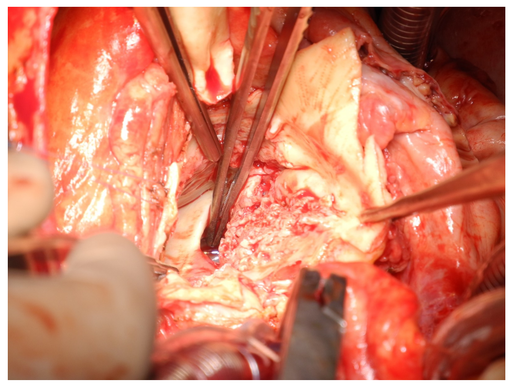
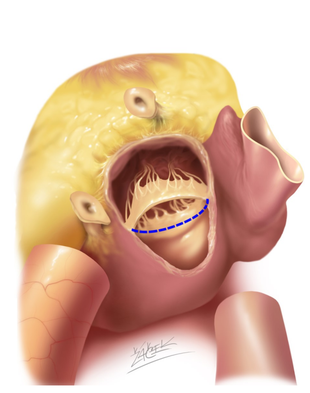
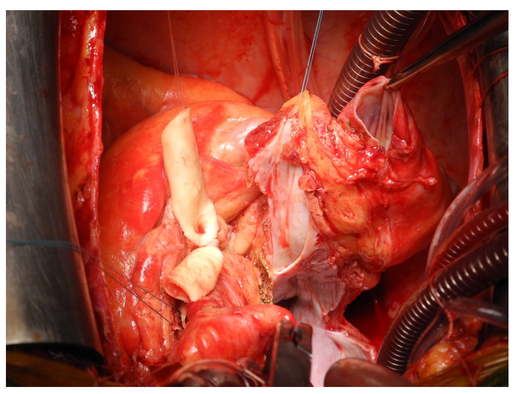
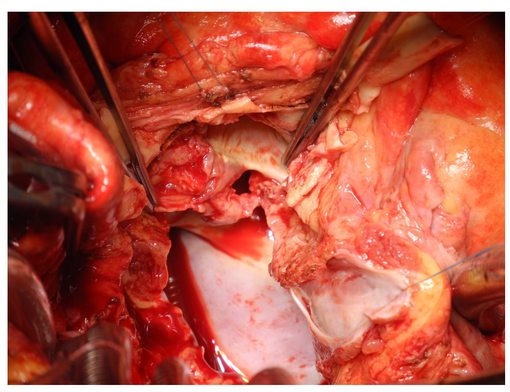
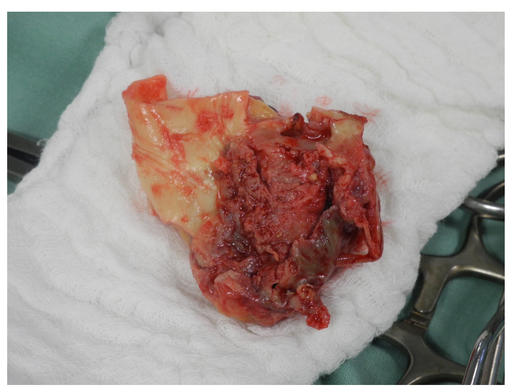
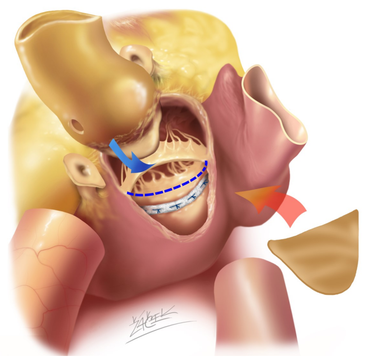
The 65 years old patient suffered under bacterial endocarditis aortic and mitral valve with perforation to left atrium was operated. The diagnoses was treated with aortic homograft, mitral and tricuspid vale reconstruction and reconstruction of left atrium wall.

Patient with history of hypertension, obesity, right foot phlebothrombosis, was hospitalised due to sepsis after multiple teeth extraction without ATB prophylaxis. Bacterial endocarditis was diagnosed,because the patient was symptomatic and the infection agens resistent S. aureus the operation was indicated.(1)
ECHO: perforated abscess in aortomitral continuity with paravalvular leak, vegetations on left atrium wall and front mitral cusp, regurgitation III gr., tricuspid regurgitation gr II+

Operation

The infection affected aortic valve, continued to intervalvular fibrous body to anterior mitral cusp. For better access vena cava superior was cut and atriotomy extended to the left atrial roof. Because removal of all infected or devitalized tissue is paramount for success. The infected part of the roof of the left atrium,the inter-trigonal tissue, the part of the anterior mitral leaflet and the whole aortic root were excised. (2)

An aortic homograft with retained anterior mitral valve leaflet was used for repair. The homograft was oriented in an anatomic position. The anterior leaflet of the mitral valve was trimmed to match the defect in the aorto-mitral curtain and sutured with a running polypropylene suture. Defect of the left atrial wall was replaced with bovine pericardium. Homograft was sutured with single stiches and the coronary ostia were sutured as button implants.

Postoperative course

Postoperative bleeding treated by substitution, extubated 45 hours after surgery, continuous long term antibiotic therapy (vankomycine), 4th day atrial fibrillation verted by medicaments.
Postoperative ECHO was satisfactory with no regurgitation on aortic or mitral valve, tricuspid regurgitation gr.II.
20th day was patient transferred to rehabilitation without symptoms.

Discussion

Reconstruction of intervalvular fibrous body during double valve replacement or aortic replacement and mitral plasty is a technicaly challenging operation, but it is useful in patients with complex valve pathology for whom no alternative procedure is available.The published early and rate mortality after thes type of operation has been 34% (resp. 10 and 24%). (3)

References

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