Case of the Week

REDO (POST MITRAL VALVE REPLACEMENT) BENTALL'S SURGERY FOR AORTIC ROOT ANEURYSMAL DILATATION

A 50-year-old male patient presented with complains of breathlessness on exertion, palpitations, and restriction of daily activities. He had undergone bioprosthetic mitral valve replacement in June 2012.

On evaluation it was found that his bioprosthetic mitral valve was functioning normally. But, he had developed new disease in the aortic valve and aortic sinuses. His CT aortogram revealed hugely dilated 7cm aortic sinuses causing annular dilatation and leakage from aortic valve leading to dilatation of left ventricle.

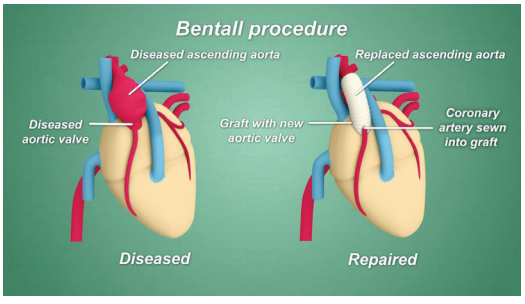
The patient underwent supramajor surgery, Redo (post MVR) Bentall's Surgery. The Bentall procedure involved aortic valve and root replacement with imported SJM composite prosthetic graft. Coronary arteries were detached and delicately reimplanted on prosthetic neoaorta requiring highly skilled surgical expertise. Postoperatively patient was extubated on POD 1. He was in ICU for 3 days after which he was shifted to ward and discharged on POD 7.

This was a challenging case considering the complexity of surgery. The patient underwent a redo (post Mitral valve replacement) surgery involving redo sternotomy, as the dilated aortic root was lying just posterior to the sternum.

Aortic root aneurysm

An aortic root aneurysm is a bulge in the wall of a specific part of the aorta, the largest artery that carries blood from heart to rest of the body. This type of thoracic aortic aneurysm occurs at the point the aorta exits the heart, which is where the aortic valve is located. As the aortic root bulges, it can cause the aortic valve to leak blood back into the heart. This means less blood is pumped into the body. They can also form blood clots, block blood flow, press on adjacent structures and cause the aorta to rupture leading to sudden death. These aneurysms need Bentall's Surgery which involves replacement of aortic valve, aortic root with composite prosthetic valve and re-implantation of coronary arteries on the neoaorta. These surgeries require surgical glue and a lot of blood products, which thankfully were not required in this case.

Intraoperative Image of Neoaorta



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