



講師

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授課主題

Transapical Off-pump Mitral Valve Repair with NeoChord Implantation

摘要

Mitral valve repair is the golden treatment of severe degenerative mitral valve regurgitation (MR). The recently introduced NeoChord DS1000 has gained increasing recognition as a feasible, potentially safe, and effective procedure with minor complications and promising outcomes. NeoChord DS1000 was introduced into clinical practice in 2012. This procedure consists in correcting mitral leaflet prolapse by positioning, through transapical access, one or more artificial chordae, and by pulling them under live 3D TEE guidance.

According to the new technology, MR valve anatomy can be divided into four groups: “type A” with isolated central posterior leaflet flail/prolapse, “type B” with posterior multi-segmental flail/prolapse, “type C” with anterior or bi-leaflet prolapse/flail, and “type D” with paracommissural flail/prolapse or any significant leaflet or annular disease such as calcification. This classification is very important because it is strictly connected to early and late results. Another important parameter for patient selection is the leaflet-to-annulus index (LAI) more than 1.2.

Exclusion criteria for NeoChord implantation through a transapical approach are previous left chest surgery, pleural disease, active endocarditis, secondary mitral regurgitation, unfavorable anatomy (i.e., heavily calcified valves, significant leaflet tethering, presence of multiple or complex color Doppler jets, significant tricuspid or aortic valvular disease, leaflet perforation, and less than 5 mm flail overlap of the diseased leaflet with respect to the normal one), and severe left ventricular dysfunction.

The most common postoperative complications included pleural effusion, atrial fibrillation, acute kidney injury, and wound dehiscence. The surgical mortality rate was comparable to conventional operation, and the recurrent MR was low in



favorable mitral valve anatomy (type A and B).

NeoChord mitral procedure appears to be a promising procedure that can be considered in selected cases.