

# Sub-annular procedures for secondary mitral valve regurgitation.

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## Abstract

Restrictive mitral valve annuloplasty is the worldwide used technique to treat secondary mitral valve regurgitation. This procedure is still associated with high rate of recurrent mitral valve regurgitation at 1 year follow-up. In the last 2 decades, several investigators proposed different surgical techniques to add to mitral valve annuloplasty to improve the long-term repair results in secondary mitral valve regurgitation. Papillary muscle (PPM) relocation technique aimed to reduce the distance between the head of PPM and the mitral annulus to relieve leaflets tethering and improve coaptation. Chordal cutting procedure consist in cutting a limited number of basal chordae to improve systolic leaflet motion and coaptation and reduce leaflets tethering; eliminating secondary chordae in the anterior leaflet can allow the leaflets to assume a more normal and less taut configuration, with more effective coaptation at their free margin. Chordal cutting and transfer procedure was proposed to maintain the continuity between the mitral apparatus and the left ventricle. PPM sling or approximation technique is performed using prolene suture reinforced with pleagets to joint bot papillary muscles; this technique reduce the muscles displacement and improve systolic coaptation. Several papers showed the superiority of the adjunction subannular procedure up to isolated restrictive annuloplasty in term of outcomes .

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