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Anterior leaflet prolapse: does the evidence imply the need for a change in our repair strategy?

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With great interest we read the meta-analysis by Khairallah *et al.* [1], who explored the results of valve repair for isolated anterior leaflet prolapse with either the Alfieri stich or neochordae. The authors found that Alfieri repair may be associated with greater freedom from recurrent regurgitation. Their results make a reader wonder why the Alfieri stich, used in only 19% of patients and 18% of studies included in the review, has not gained wider acceptance?

A major limitation of the current meta-analysis is the absence of a direct comparison, with the same surgeons performing both types of operations, between groups. Despite growing standardization, mitral valve repair remains a craftsmanship, especially in case of anterior leaflet prolapse. Often, a relatively short posterior leaflet is present and optimal annuloplasty device sizing is crucial to secure good repair durability. Even greater concerns arise when the quality of valve repair between both groups is studied. The Alfieri stich group seems well standardized as we assume that the type of annuloplasty does not play a role on repair durability with this technique. On the other hand, several risk factors are present in the studies from the neochordae group. It has been suggested that the use of band rather than a ring is related to worse repair durability in case of anterior leaflet prolapse [2]. In studies with the highest

rate of recurrent regurgitation, many patients underwent valve repair with a flexible band. Moreover, a significant proportion of studies described a new technique for measuring the length of the implanted neochordae. Potentially, failures related to the learning curve with the introduction of new techniques are present. Lastly, the heterogeneity of the definition of recurrent regurgitation (ranging from grade 2+ to grade 4+) prevents any clear comparison between studies.

The amount of limitations of this meta-analysis prevents any final conclusions to be drawn. While the problem of mitral valve stenosis is briefly discussed, only a few small studies have actually studied the effect of the Alfieri stich on post-repair exercise performance and health-related quality of life. More studies on this topic might help better understand the late performance of this repair technique.

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