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Editorial

Repeat Percutaneous Balloon Mitral Valvotomy: the Right Choice Again and Again

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Gomes et al.[1] report in this issue the experience over several years with second and third percutaneous mitral balloon valvotomy procedures. The report is remarkable because the population required to derive a meaningful experience from patients undergoing repeated procedures must be large. These authors draw from almost 1500 percutaneous balloon mitral valvotomy (PBMV) procedures, of which 90 patients ultimately underwent second and/or third dilatations.

The results are surprising in one important respect. Patients who underwent repeated procedures were younger as a group than those who had only a single procedure. The authors attribute this to the greater likelihood of repeated episodes of active rheumatic disease in this younger group and this highlights the importance of remembering to administer rheumatic fever prophylaxis to younger patients undergoing PBMV procedures[2].

About 6% of the total population underwent subsequent PBMV. This is consistent with other reports where between 5% and 15% of treated patients have returned for additional procedures over the first decade after therapy[3-8]. This relatively small proportion of patients is due in some part to the great success of the procedure in most patients, who get a very durable result, and from the nature of progressive disease where many returning patients have mixed valvular disease or progressive mitral regurgitation that necessitates surgical therapy as their second procedure. In this report we are not aware of the proportion who ultimately underwent surgical therapy during the follow-up period.

A variety of dilatation techniques were used in both groups of patients. Conventional double balloon, Inoue single balloon and Cribier metallic valvulotome approaches were used, and the double balloon technique was used also with the single wire technique, the Multi-Track system. There are numerous reports that show similar clinical results independent of the technique or balloon type used to accomplish PBMV[9]. Thus, the variety of approaches in this report has no important bearing on the conclusions or outcome. It is fair to say that a commissurotomy by any method, including surgical approaches, is a commissurotomy.

The durability of the procedure is well characterized in the group B patients, with almost 10 years of average time to development of a first restenosis. Interestingly, in the group A patients, the time to first restenosis was just under 5 years. With second and third dilatation procedures, the additive durability approached that of group B patients, who had only a single procedure. Thus, the strategy of repeated dilatations is useful to defer the need for surgical therapy for as long as possible. This re-affirms the author's conclusions that the strategy of multiple dilatations is sound.

The authors note in the second paragraph of the introduction that valve anatomy is usually assessed by the Wilkins score[10]. The score is a rough grading system to characterize the degree of valve deformity. The score has been used as an arbitrary decision making tool for patient selection for PBMV. This is an important misuse of the score. As the authors note, the use of the score is important for prognostic purposes, but it is only one of a number of variables that are used in decision making about the performance of PBMV. Scores greater than 8 are characterized in many articles as leading to poor results. This is an incorrect assessment of the broad literature on this subject. It is clear that patients with scores greater than 8 and thus more valve deformity tend to be older, have additional comorbidities, and more pulmonary hypertension. Their outcomes are not as good as patients with scores less than 8, but this is also true if these older, more complicated and sicker patients undergo surgical valve replacement as a first step[11-13]. Thus, PBMV is warranted in a substantial majority of patients with predominant mitral stenosis irrespective of echo score. Many of the older patients

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will derive several years of symptom free life after a procedure, with very little morbidity, and the option for surgery is still preserved.

Importantly, pulmonary hypertension can be ameliorated, so that when surgery is ultimately necessary, these patients are lower risk for valve replacement intervention.

In summary, this report clarifies the outcomes of subsequent PBMV procedures in patients after a first successful therapy. The strategy of repeated procedures in those patients who re-present with predominant mitral stenosis and require additional PBMV procedures is clearly useful.

CONFLICT OF INTEREST

The author has any conflict of interest to declare in respect to this editorial.

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