for this surgery remains uncontrolled angina and that most patients considered for bypass surgery do not have overt symptoms of heart failure. However, it is also generally recognized that a primary requirement of this surgical procedure is that objective evidence of efficacy be demonstrable in addition to symptomatic improvement. Since both the risks and benefits of this procedure are so clearly related to its effects on left ventricular contraction, the importance of differentiating reversible from irreversible depression of ischemic myocardium has been clear for some time now. Thus, although we believe that the ventriculographic determination of residual contractile ability is of considerable importance, we certainly would agree with the need to obtain additional data on the relationship between negative preoperative ventriculographic responses and subsequent postoperative findings.

RICHARD H. HELFANT, M.D.
Presbyterian-University of Pennsylvania Medical Center Philadelphia, Pennsylvania 19104

Reference

Posterior Mitral Leaflet Motion in Severe Mitral Stenosis

To the Editor:

Posterior motion of the posterior mitral leaflet in diastole in patients with severe mitral stenosis is purported in the recently published study by Levisman et al. but not clearly proved. The answer to this problem is obviously important because although EF slope correlates roughly with degree of mitral stenosis, it is influenced to a great degree by left ventricular compliance and pulmonary hypertension. Thickening of the mitral leaflets and reduction of "a" wave are the features suggested by the authors to rely upon. Both are quite subjective and the latter useless in atrial fibrillation. Therefore, I believe it is important that we critically review the proof for discounting posterior mitral leaflet motion as a reliable sign of severe mitral stenosis. I do not choose to question its unreliability in milder cases of mitral stenosis.

The data is presented in such a way that it is not possible for the reader to decide for himself that any one patient with unquestionably severe mitral stenosis had posterior diastolic motion of the posterior mitral leaflet. Although there are two convincing echocardiograms showing this finding, the corresponding patient is not identified. This is essential because the severity or even presence of significant mitral stenosis is not clearly documented in all 16 patients. It is my impression that the echocardiogram used in nine of the 16 patients was performed after commissurotomy. The mitral valve area of 0.52 cm² calculated in one patient with 4+ mitral regurgitation is clearly erroneous since it is incompatible with life. This error is probably due to failure to correct cardiac output for degree of mitral regurgitation in Gorbins’s formula. The degree of mitral stenosis is, therefore, probably overestimated by the same mechanism in all of the patients with mitral regurgitation. This is ten out of 16 patients. Another small unclear point is that it was said that five patients had severe mitral stenosis (classification of severe was given as less than 1.2 cm²) but six patients in the table had calculated mitral valve area of 1 cm or less.

Review of our small series of 16 patients with moderate to severe mitral stenosis proved by catheterization revealed no instances of posterior diastolic motion of the posterior mitral leaflet. This appears to agree with the Indiana University experience in 41 cases.

Although it would seem possible that posterior diastolic motion of the posterior mitral leaflet may occur in mild mitral stenosis, its occurrence in more severe cases is either very rare or has not yet been documented. Therefore, this finding remains, in my mind, the most reliable sign in echocardiography to rule out moderate to severe mitral stenosis.

JERRY F. MEYER, M.D.
George Washington University Medical Center Washington, D.C. 20037

References

The authors reply:

We appreciate Dr. Meyer’s concern about our paper. However, we believe that he has not analyzed our data correctly. We stated that in the majority of cases with mitral stenosis the posterior mitral leaflet does appear to move anteriorly, parallel to the anterior leaflet as has been reported in the literature. We presented data on cases with significant mitral stenosis in whom the posterior mitral leaflet moved posteriorly. Therefore we concluded that the latter finding cannot categorically exclude the diagnosis of mitral stenosis.

Echocardiography, to a certain extent, remains an empirical technique, and we should keep our minds open for a variety of different patterns that may be recorded from a single disease entity.

We agree with Dr. Meyer that estimation of the leaflet thickness is subjective. However, we proposed an objective way of assessing the "A" wave of the mitral valve (FA/DE ratio) which was reproducible and quite helpful. Here again, these criteria are ancillary and by no means conclusive by themselves.

Dr. Meyer agrees that the echocardiograms shown in figure 3 are convincing for mitral stenosis with posterior motion of the posterior mitral leaflet. One shows mild stenosis and the other on the right had significant stenosis, the latter corresponds to patient #5 in our table. For obvious reasons we were not able to publish the echocardiograms of all 16 patients.
Letter: Posterior mitral leaflet motion in severe mitral stenosis.
J F Mayar

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