

Left atrial myxoma (Chap. 289e) may obstruct LA emptying, causing dyspnea, a diastolic murmur, and hemodynamic changes resembling those of MS. However, patients with an LA myxoma often have features suggestive of a systemic disease, such as weight loss, fever, anemia, systemic emboli, and elevated serum IgG and interleukin 6 (IL-6) concentrations. The auscultatory findings may change markedly with body position. The diagnosis can be established by the demonstration of a characteristic echo-producing mass in the LA with TTE.

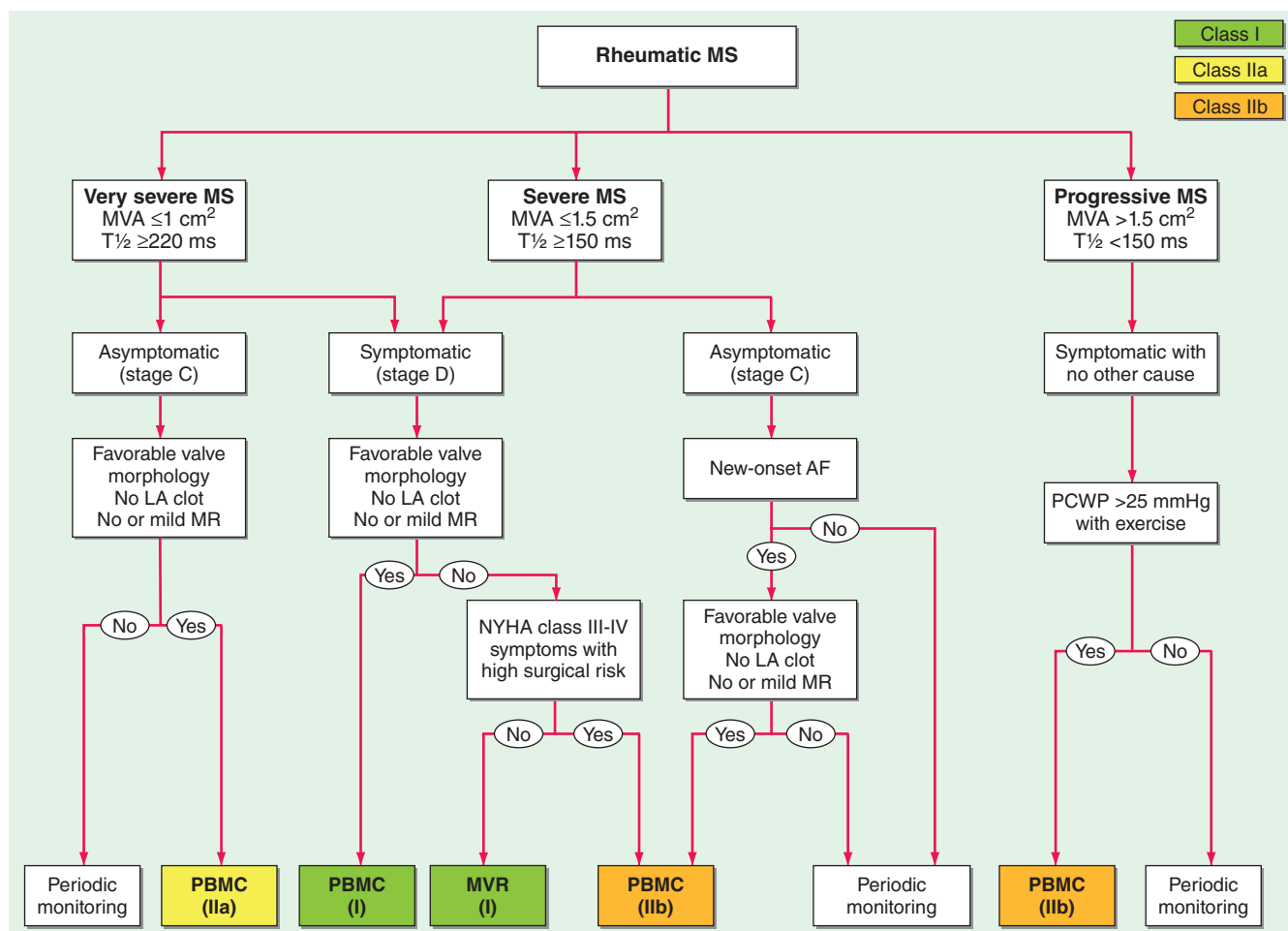
### CARDIAC CATHETERIZATION

Left and right heart catheterization can be useful when there is a discrepancy between the clinical and noninvasive findings, including those from TEE and exercise echocardiographic testing as appropriate. Catheterization is helpful in assessing associated lesions, such as aortic stenosis (AS) and AR. Catheterization and coronary angiography are not usually necessary to aid in decision-making about surgery in patients younger than 65 years of age with typical findings of severe mitral obstruction on physical examination and TTE. In men older than 40 years of age, women older than 45 years of age, and younger patients with coronary risk factors, especially those with positive noninvasive stress tests for myocardial ischemia, coronary angiography is advisable preoperatively to identify patients with critical coronary obstructions that should be bypassed at the time of operation. Computed tomographic coronary angiography (CTCA) (Chap. 270e) is now often used to screen preoperatively for the

presence of coronary artery disease (CAD) in patients with valvular heart disease and low pretest likelihood of CAD. Catheterization and left ventriculography may be useful in patients who have undergone PMBV or previous mitral valve surgery for MS, and who have redeveloped limiting symptoms, especially if questions regarding the severity of the valve lesion(s) remain after noninvasive study.

### TREATMENT MITRAL STENOSIS

(Fig. 284-1) Penicillin prophylaxis of group A  $\beta$ -hemolytic streptococcal infections (Chap. 381) for secondary prevention of rheumatic fever is important for at-risk patients with rheumatic MS. Recommendations for infective endocarditis prophylaxis are similar to those for other valve lesions and are restricted to patients at high risk for complications from infection, including patients with a history of endocarditis. In symptomatic patients, some improvement usually occurs with restriction of sodium intake and small doses of oral diuretics. Beta blockers, nondihydropyridine calcium channel blockers (e.g., verapamil or diltiazem), and digitalis glycosides are useful in slowing the ventricular rate of patients with AF. Warfarin therapy targeted to an international normalized ratio (INR) of 2–3 should be administered indefinitely to patients with MS who have AF or a history of thromboembolism. The routine use of warfarin in patients in sinus rhythm with LA enlargement (maximal dimension



**FIGURE 284-1** Management of rheumatic mitral stenosis. See legend for Fig. 283-2 for explanation of treatment recommendations (class I, IIa, IIb) and disease stages (C, D). Preoperative coronary angiography should be performed routinely as determined by age, symptoms, and coronary risk factors. Cardiac catheterization and angiography may also be helpful when there is a discrepancy between clinical and noninvasive findings. AF, atrial fibrillation; LA, left atrial; MR, mitral regurgitation; MS, mitral stenosis; MVA, mitral valve area; MVR, mitral valve surgery (repair or replacement); NYHA, New York Heart Association; PCWP, pulmonary capillary wedge pressure; PMBC, percutaneous mitral balloon commissurotomy; and T<sub>1/2</sub>, pressure half-time. (Adapted from RA Nishimura et al: 2014 AHA/ACC Guideline for the Management of Patients with Valvular Heart Disease. *J Am Coll Cardiol* doi: 10.1016/j.jacc.2014.02.536, 2014, with permission.)