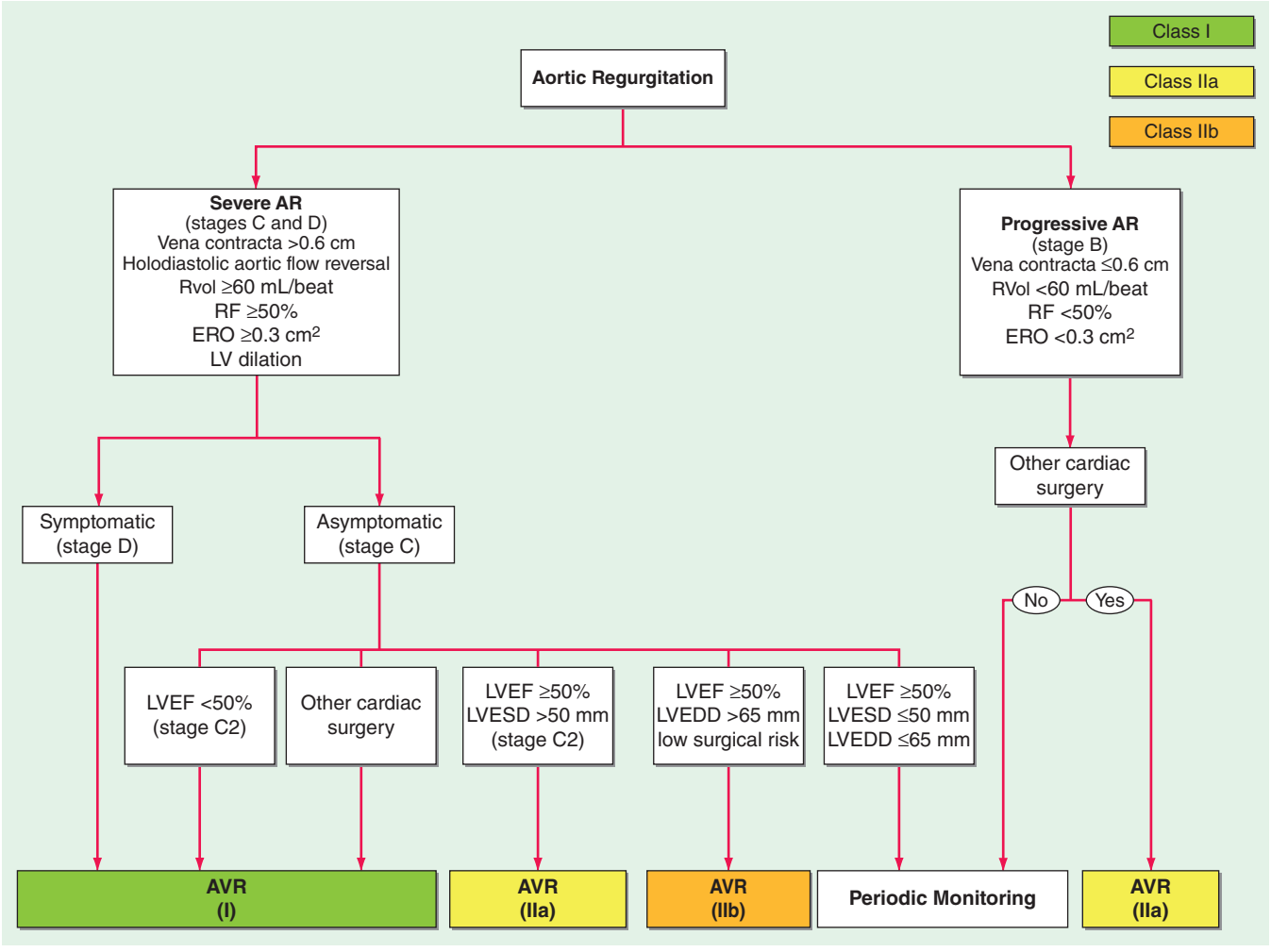

FIGURE 283-6 Management of patients with aortic regurgitation. See legend for Fig. 283-2 for explanation of treatment recommendations (Class I, IIa, and IIb) and disease stages (B, C1, C2, D). Preoperative coronary angiography should be performed routinely as determined by age, symptoms, and coronary risk factors. Cardiac catheterization and angiography may also be helpful when there is a discrepancy between clinical and noninvasive findings. Patients who do not meet criteria for intervention should be monitored periodically with clinical and echocardiographic follow-up. AR, aortic regurgitation; AVR, aortic valve replacement (valve repair may be appropriate in selected patients); ERO, effective regurgitant orifice; LV, left ventricular; LVEDD, left ventricular end-diastolic dimension; LVEF, left ventricular ejection fraction; LVESD, left ventricular end-systolic dimension; RF, regurgitant fraction; RVol, regurgitant volume. *(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.)*

syphilitic aortitis should receive a full course of penicillin therapy **(Chap. 206)**. Beta blockers and the angiotensin receptor blocker losartan may be useful to retard the rate of aortic root enlargement in young patients with Marfan's syndrome and aortic root dilation. Early reports of the efficacy of losartan in patients with Marfan's syndrome have led to its use in other populations of patients including those with BAV disease and aortopathy. The use of beta blockers in patients with valvular AR was previously felt to be relatively contraindicated due to concerns that the resulting slowing of the heart rate would allow more time for diastolic regurgitation. More recent observational reports, however, suggest that beta blockers may provide functional benefit in patients with chronic AR. Beta blockers can sometimes provide incremental blood pressure lowering in patients with chronic AR and hypertension. Patients with severe AR, particularly those with an associated aortopathy, should avoid isometric exercises.

SURGICAL TREATMENT

In deciding on the advisability and proper timing of surgical treatment, two points should be kept in mind: (1) patients with chronic severe AR usually do not become symptomatic until *after* the development of myocardial dysfunction; and (2) when delayed too long (defined as >1 year from onset of symptoms or LV dysfunction), surgical treatment often does not restore normal LV function. Therefore, in patients with chronic severe AR, careful clinical follow-up and noninvasive testing with echocardiography at approximately 6- to 12-month intervals are necessary if operation is to be undertaken at the optimal time, i.e., *after* the onset of LV dysfunction but *prior to* the development of severe symptoms. Exercise testing may be helpful to assess effort tolerance more objectively. Operation can be deferred as long as the patient both remains asymptomatic and retains normal LV function without severe chamber dilation.

AVR is indicated for the treatment of severe AR in symptomatic patients irrespective of LV function. In general, the operation should be carried out in asymptomatic patients with severe AR and progressive LV dysfunction defined by an LVEF <50%, an LV end-systolic dimension >50 mm, or an LV diastolic dimension >65 mm. Smaller dimensions may be appropriate thresholds in individuals of smaller stature. Patients with severe AR without indications for operation should be followed by clinical and echocardiographic examination every 6–12 months.