



**FIG 23-5** Obstruction to ventricular ejection can occur at the valvular level (shown), below the valve (subvalvular), or above the valve (supravalvular). Pulmonary stenosis is shown here. *Ao*, Aorta; *LA*, left atrium; *LV*, left ventricle; *PA*, pulmonary artery; *RA*, right atrium; *RV*, right ventricle.

Coarctation of the aorta (narrowing of the aortic arch), aortic stenosis, and pulmonic stenosis are typical defects in this group (Box 23-2). Hemodynamically, there is a pressure load on the ventricle and decreased cardiac output. Clinically, infants and children exhibit signs of HF. Children with mild obstruction may be asymptomatic. Rarely, as in severe pulmonic stenosis, hypoxemia may be seen.

## Box 23-2

### Obstructive Defects

#### Coarctation of the Aorta