Acute Rheumatic Fever
Subcutaneous Nodules and Carditis

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We present images of an 8-year-old child with a fever for the preceding 45 days, migratory polyarthralgia involving large joints, and progressively worsening dyspnea on exertion. Examination revealed subcutaneous nodules over the bony prominences of the spine, scapulae, forehead, extensor surfaces of bilateral elbow joints and knee joints, ankles, and the rib cage (Figure 1). The nodules were 0.5 to 1.5 cm in size, rounded, firm, nontender, and mobile. A loud pericardial rub and evidence of severe mitral regurgitation were found on cardiovascular examination. Acute-phase reactants were elevated (erythrocyte sedimentation rate 50 mm in first hour, C-reactive protein 8.1 mg/L), and an electrocardiogram showed prolongation of PR interval (Figure 2). An echocardiogram also revealed severe mitral regurgitation with thickened valve leaflets (Figure 2; Video I of the online-only Data Supplement) and subvalvar apparatus and a small pericardial effusion. The edges of the mitral valve leaflets showed evidence of fine focal nodularity (Figure 2, Video II of the online-only Data Supplement), which may represent the echocardiographic equivalent of rheumatic verrucae.1

Acute rheumatic fever is a syndrome more than a disease, with disparate elements affecting various tissues, often at various times. Subcutaneous nodules have been reported in 1% to 21% of the cases. They rarely occur as an isolated manifestation, and they are associated with carditis in most cases.

Disclosures
None.

Reference
Figure 2. A, Parasternal long-axis view showing thickening of the mitral valve leaflets. AML, anterior mitral leaflet; LA, left atrium; LV, left ventricle; RV, right ventricle; PML, posterior mitral leaflet. B, Parasternal short-axis view showing the left ventricle and mitral valve in cross-section. Note fine focal nodularity along the edges of the mitral valve (arrows) suggesting verrucae. C, Electrocardiogram (lead II) with prolonged PR interval (160 ms).