viruses. GABHS infection is the most common causative organism for this infection. Children with GABHS infection of the upper airway (**strep throat**) are at risk for **rheumatic fever (RF)**, an inflammatory disease of the heart, joints, and central nervous system (CNS) (see Chapter 23), and **acute glomerulonephritis (AGN)**, an acute kidney infection (see Chapter 26). Permanent damage can result from these sequelae—especially RF. GABHS may also cause skin manifestations, including impetigo and pyoderma.

Clinical Manifestations

GABHS infection is generally a relatively brief illness that varies in severity from subclinical (no symptoms) to severe toxicity. The onset is often abrupt and characterized by pharyngitis, headache, fever, and abdominal pain. The tonsils and pharynx may be inflamed and covered with exudate (Fig. 21-1), which usually appear by the second day of illness. However, streptococcal infections should be suspected in children older than 2 years old who have pharyngitis without exudate or nasal symptoms (Fig. 21-2). The tongue may appear edematous and red (strawberry tongue), and the child may have a fine sandpaper rash on the trunk, axillae, elbows, and groin seen in **scarlet fever** (caused by a strain of group A streptococcus). The uvula is edematous and red. Anterior cervical lymphadenopathy (in 30% to 50% of cases) usually occurs early, and the nodes are often tender. Pain can be relatively mild to severe enough to make swallowing difficult. Clinical manifestations usually subside in 3 to 5 days unless complicated by sinusitis or parapharyngeal, peritonsillar, or retropharyngeal abscess. Nonsuppurative complications may appear after the onset of GABHS–AGN in about 10 days and RF in an average of 18 days. Streptococcal skin infections can occur in AGN.