

Figure 3-14 Fibrinous pericarditis. **A**, Deposits of fibrin on the pericardium. **B**, A pink meshwork of fibrin exudate (F) overlies the pericardial surface (P).

epicardium in the area of exudation and, if the fibrosis is extensive, obliteration of the pericardial space.

Purulent (Suppurative) Inflammation, Abscess

Purulent inflammation is characterized by the production of pus, an exudate consisting of neutrophils, the liquefied debris of necrotic cells, and edema fluid. The most frequent cause of purulent (also called *suppurative*) inflammation is infection with bacteria that cause liquefactive tissue necrosis, such as staphylococci; these pathogens are referred to as *pyogenic* (pus-producing) bacteria. A common example of an acute suppurative inflammation is acute appendicitis. **Abscesses are localized collections of purulent inflammatory tissue** caused by suppuration buried in a tissue, an organ, or a confined space. They are produced by seeding of pyogenic bacteria into a tissue (Fig. 3-15). Abscesses have a central region that appears as a mass of necrotic leukocytes and tissue cells. There is usually a zone of preserved neutrophils around this necrotic focus, and outside this region there may be vascular dilation and parenchymal and fibroblastic proliferation, indicating chronic inflammation and repair. In time the abscess may

become walled off and ultimately replaced by connective tissue.

Ulcers

An ulcer is a local defect, or excavation, of the surface of an organ or tissue that is produced by the sloughing (shedding) of inflamed necrotic tissue (Fig. 3-16). Ulceration can occur only when tissue necrosis and resultant inflammation exist on or near a surface. It is most commonly encountered in (1) the mucosa of the mouth, stomach, intestines, or genitourinary tract, and (2) the skin and subcutaneous tissue of the lower extremities in older persons who have circulatory disturbances that predispose to extensive ischemic necrosis.

Ulcerations are best exemplified by peptic ulcer of the stomach or duodenum, in which acute and chronic inflammation coexist. During the acute stage there is intense polymorphonuclear infiltration and vascular dilation in the margins of the defect. With chronicity, the margins and base of the ulcer develop fibroblastic proliferation, scarring, and the accumulation of lymphocytes, macrophages, and plasma cells.

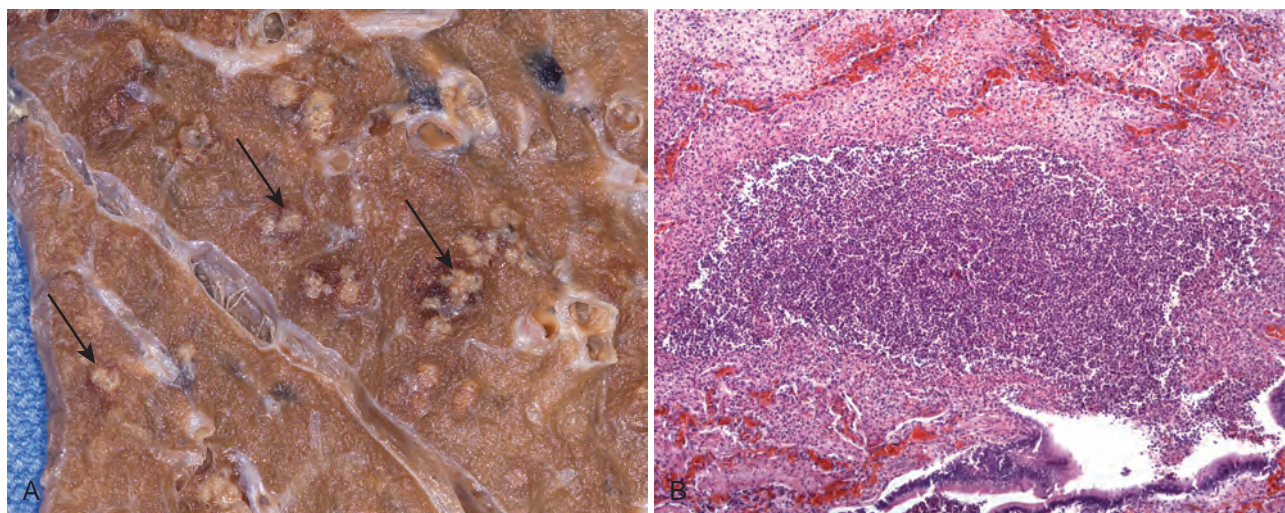


Figure 3-15 Purulent inflammation. **A**, Multiple bacterial abscesses (arrows) in the lung in a case of bronchopneumonia. **B**, The abscess contains neutrophils and cellular debris, and is surrounded by congested blood vessels.