Rietkerk, and Woolf, 2013; Mahmood and Bowe, 2014).

Pathophysiology

Four pathophysiologic factors have the greatest influence on acne development: excessive sebum production, alterations in follicular growth and differentiation with colonization of *Propionibacterium acnes*, and an accompanying immune response and inflammation (Eichenfield, Krakowski, Piggott, et al, 2013). Acne severity is proportional to the sebum secretion rate, which is genetically determined and increases at the time of adrenocortical maturation. Inflammation occurs with the proliferation of *Propionibacterium acnes*, which draws in neutrophils, causing inflammatory papules, pustules, nodules, and cysts (Fig. 16-1). Acne can be categorized as comedonal, inflammatory, or both and can be classified as mild, moderate, or severe based on the number and type of comedones and the extent of affected skin (Eichenfield, Krakowski, Piggott, et al, 2013).

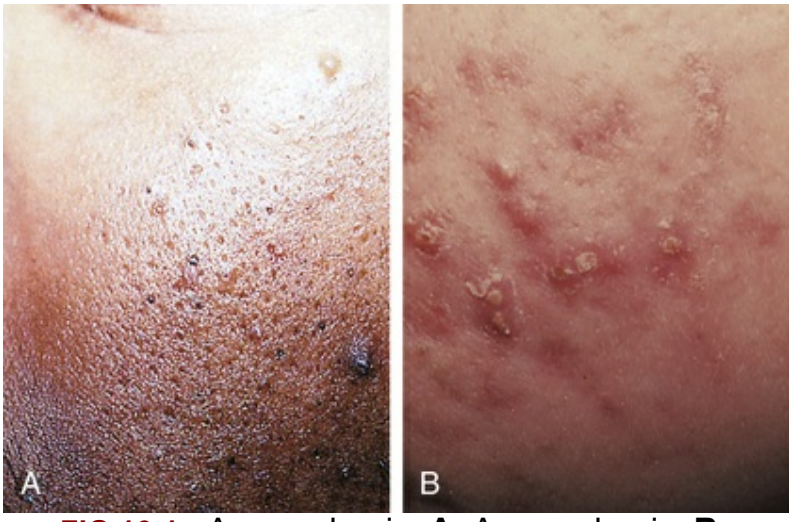

FIG 16-1 Acne vulgaris. **A,** Acne vulgaris. **B,** Comedones with a few inflammatory pustules. (From Zitelli BJ, McIntire SC, Nowalk AJ: *Zitelli and Davis' atlas of pediatric physical diagnosis,* ed 6, St Louis, 2012, Saunders/Elsevier.)

Therapeutic Management

Successful management of acne depends on a cooperative effort between the care provider, adolescent, and parents. Unlike many