

can be removed surgically. Treatment with glucocorticoids has not been shown to reduce the risk of myocarditis or polyneuropathy.

■ PROGNOSIS

The mortality rate for diphtheria is 5–10% but may approach 20% among children <5 years old and adults >40 years of age. Fatal pseudomembranous diphtheria typically occurs in patients with nonprotective antibody titers and in unimmunized patients. The pseudomembrane may actually increase in size from the time it is first noted. Risk factors for death include bullneck diphtheria; myocarditis with ventricular tachycardia; atrial fibrillation; complete heart block; an age of >60 years or <6 months; alcoholism; extensive pseudomembrane elongation; and laryngeal, tracheal, or bronchial involvement. Another important predictor of fatal outcome is the interval between the onset of local disease and the administration of antitoxin. Cutaneous diphtheria has a low mortality rate and is rarely associated with myocarditis or peripheral neuropathy.

■ PREVENTION

Vaccination Sustained campaigns for vaccination of children and adequate boosting vaccination of adults are responsible for the exceedingly low incidence of diphtheria in most developed nations. Currently, diphtheria toxoid vaccine is coadministered with tetanus vaccine (with or without acellular pertussis). DTaP (full-level diphtheria toxoid, tetanus toxoid, and acellular pertussis vaccine) is currently recommended for children up to the age of 6; DTaP replaced the earlier whole-cell pertussis vaccine DTP in 1997. Tdap is a tetanus toxoid, reduced diphtheria toxoid, and acellular pertussis vaccine formulated for adolescents and adults. Tdap was licensed for use in the United States in 2005 and is recommended for children ≥7 years old and for adults. It is recommended that all adults (i.e., persons >19 years old) receive a single dose of Tdap if they have not received it previously, regardless of the interval since the last dose of Td (tetanus and reduced-dose diphtheria toxoids, adsorbed). Tdap vaccination is a priority for health care workers, pregnant women, adults anticipating contact with infants, and adults not