SEVERE MALARIA

In large randomized controlled clinical trials, parenteral artesunate, a water-soluble artemisinin derivative, has reduced severe falciparum malaria mortality rates by 35% in Asian adults and children and by 22.5% in African children compared with quinine treatment. Artesunate therefore is now the drug of choice for all patients with severe malaria everywhere. Artesunate is given by IV injection but is also absorbed rapidly following IM injection. Artemether and the closely related drug artemotil (arteether) are oil-based formulations given by IM injection; they are erratically absorbed and do not confer the same survival benefit as artesunate. A rectal formulation of artesunate has been developed as a community-based pre-referral treatment for patients in the rural tropics who cannot take oral medications. Pre-referral administration of rectal artesunate has been shown to decrease mortality rates among severely ill children without access to immediate parenteral treatment. IV artesunate has been approved by the U.S. Food and Drug Administration for emergency use in severe malaria and can be obtained through the Centers for Disease Control and Prevention (CDC) Drug Service (see end of chapter for contact information). The antiarrhythmic quinidine gluconate was used to treat severe malaria in the United States previously, but manufacturing was discontinued in 2019; artesunate is much more effective and safer. Although parenteral quinine is steadily being replaced by parenteral artesunate in endemic areas, it still has a role in the very few cases of artemisinin-resistant severe falciparum malaria from Southeast Asia, where both artesunate and quinine are given together in full doses.

Severe falciparum malaria constitutes a medical emergency requiring intensive nursing care and careful management. Frequent evaluation of the patient's condition is essential. Adjunctive treatments such as high-dose glucocorticoids, urea, heparin, dextran, desferrioxamine, antibody to tumor necrosis factor α, high-dose phenobarbital (20 mg/kg), mannitol, or large-volume fluid or albumin boluses have proved either ineffective or harmful in clinical trials and should not be used. In acute renal failure or severe