

hypotension, and oliguria or anuria. Patients are severely lethargic or comatose. Multiorgan failure is common. This is the most dangerous stage of shock.

Management of septic shock involves measures to provide hemodynamic stability and adequate oxygenation to the tissues and the use of antimicrobials to treat the infectious organism. As with other forms of shock, hemodynamic stability is achieved with fluid volume resuscitation and inotropic agents as needed. Providing adequate oxygenation often requires intubation and mechanical ventilation, supplemental oxygen, sedation, and paralysis to decrease the work of breathing. Septic shock involves activation of complement proteins that promote clumping of the granulocytes in the lung. The granulocytes can release chemicals that can cause direct lung injury to the pulmonary capillary endothelium. This causes a fluid leak into the alveoli, which causes stiff, noncompliant lungs. DIC and multiorgan dysfunction may also occur and require prompt assessment and management.

Newer therapies are being developed to modify the host immune response by attempting to block various mediators, thereby interrupting the inflammatory cascade.

Early identification of the symptoms of septic shock is critical to patient survival. A high index of suspicion is required in all critically ill patients who are at greater risk for sepsis because of multiple invasive lines and devices, poor nutrition, and impaired immune function. Subtle alterations in tissue perfusion and unexplained tachypnea and tachycardia often are early warning signs. Identification of the infectious agent and prompt treatment are also critical to patient survival. Broad-spectrum antibiotics should be given, and the site of infection should be removed if possible (e.g., drain abscesses, remove indwelling lines). Patients should be managed in an ICU in which continuous monitoring and sophisticated cardiac and respiratory support are available. Multidisciplinary collaboration is essential in managing these critically ill patients.

Toxic Shock Syndrome

Toxic shock syndrome (TSS) is a relatively rare condition caused by the toxins produced by the *Staphylococcus* bacteria. First described