

rural areas; dengue and yellow fever are important exceptions. After a prodrome of fever, myalgias, and malaise, patients develop evidence of vascular damage, petechiae, and local hemorrhage. Shock, multifocal hemorrhaging, and neurologic signs (e.g., seizures or coma) predict a poor prognosis. Dengue ([Chap. 209](#)) is the most common arboviral disease worldwide. More than half a million cases of dengue hemorrhagic fever occur each year, with at least 12,000 deaths. Patients have a triad of symptoms: hemorrhagic manifestations, evidence of plasma leakage, and platelet counts of $<100,000/\mu\text{L}$. Mortality rates are 10–20%. If dengue shock syndrome develops, mortality rates can reach 40%. Ebola infection has been associated with outbreaks with high mortality rates. The 2014 outbreak in West Africa had a mortality rate of $>50\%$. Symptoms can appear 2–21 days after exposure, but most patients become ill within 9 days. The patient first presents with fatigue, fever, headache, and muscle pains, and the illness can progress to multiorgan failure and hemorrhaging. Careful volume-replacement therapy to maintain blood pressure and intravascular volume is key to survival in these infections. Ribavirin also may be useful against Arenaviridae and Bunyaviridae.

Other viral illnesses with rash, such as measles, can be associated with significant mortality rates. Measles continues to be responsible for more than 100,000 deaths per year, worldwide, and to cause outbreaks in populations with low vaccination rates.

■ SEPSIS WITH A SOFT TISSUE/MUSCLE PRIMARY FOCUS

See also [Chap. 129](#).

Necrotizing Fasciitis This infection is characterized by extensive necrosis of the subcutaneous tissue and fascia. It may arise at a site of minimal trauma or surgical incision and may also be associated with recent varicella, childbirth, or muscle strain. The most common causes of necrotizing fasciitis are group A streptococci alone ([Chap. 148](#)) and a mixed facultative and anaerobic flora ([Chap. 129](#)); the incidence of group A streptococcal necrotizing fasciitis has been increasing for the past quarter-century. Diabetes mellitus, IV drug use, chronic liver or renal disease, and malignancy are associated