

## Surgical Infection Society Statement on Ebola Hemorrhagic Fever

**S**URGEONS IN NORTH AMERICA need to be prepared to evaluate and to operate on patients with ebola hemorrhagic fever (Ebola). In the limited literature that exists, most clinical observations include abdominal pain [1–6]. The first case of Ebola diagnosed in the United States presented with a constellation of symptoms that included abdominal pain.

We can anticipate that surgeons will be consulted for abdominal pain in patients who have Ebola. Additionally, surgical emergencies not related to the ebolavirus will arise in patients with Ebola and perhaps those with suspected Ebola. The effect of Ebola on surgical outcomes is not known; however, because of the rapid progression of the infection, it is anticipated that the prognosis after surgery will remain guarded.

There is experience with surgery in other communicable viral diseases. The American College of Surgeons' *Statement on the Surgeon and HIV Infection* recommends that using the highest standards of infection control, surgeons are obligated ethically to render care to HIV-infected patients [7]. Ebola appears to be transmitted more easily than HIV, but the U.S. Centers for Disease Control and Prevention (CDC) has recommendations for infection control by healthcare workers aiding Ebola patients to include standard, contact, and droplet precautions [8]. Additionally, the World Health Organization (WHO) has published guidelines on protective measures for medical staff [9].

There is research into existing medications that may inhibit cell entry for the ebolavirus. In cell culture, amiodarone, verapamil, and dronedarone inhibit cell entry by filoviral, which includes the ebolavirus [10]. There is no clinical evidence regarding the effect of these drugs on acquisition of Ebola by healthcare workers who have been exposed. The gravity of the situation may warrant a clinical trial.

There is little information on the critical care management of Ebola patients. In one animal study, Ebola caused hypotension, tachycardia, tachypnea, acidosis, and acute kidney injury. Treatment with normal saline attenuated the renal injury, but did not affect mortality [11]. At present, no specific recommendations can be made regarding how to manage patients with Ebola who are critically ill.

While we are faced with an incompletely understood challenge, the basic principles of compassionate care using the best available science apply to the current situation.

Surgeons must remain abreast of the latest developments in order to be prepared to care for patients safely with Ebola and surgical problems.

### References

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