Postoperative Infections

Infections after **surgical procedures** (operations) can cause pain, poor wound healing, need for further treatment including antibiotics, longer hospital stays, and increased health care costs. Postoperative infections may cause severe problems, including failure of the surgical procedure, other surgical complications, sepsis, organ failure, and even death. Some persons are at higher risk of developing postoperative infections than others. Ways to try to prevent these types of infections include giving antibiotics before a procedure, when appropriate; making sure the patient is in the best condition possible before elective surgery; using an antiseptic solution to "prep" the area around a surgical incision; maintaining **sterility** (no bacteria or other organisms, such as viruses or parasites) of the surgical area (also called the "surgical field") and operating tools; and having operating room staff wear clean scrub clothes, hats, and masks. The June 23/30, 2010, issue of *JAMA* contains an article evaluating measures designed to reduce the risk of infections that occur after surgical procedures.

RISK FACTORS FOR POSTOPERATIVE INFECTION

- Diabetes
- Obesity
- Older age
- Emergency operations
- Obvious contamination (with debris, pus, stool, or other substances) of the injury or the surgical area

TREATMENT

- Antibiotics are given, sometimes by mouth but often through an intravenous line (an IV) for serious infections. In many cases, cultures of the affected area are taken to see if **resistant bacteria** (which do not respond to the usual antibiotic treatment) are involved.
- Reexploration of a surgical incision may be necessary to drain pus, an **abscess** (a collection of infected fluid), or a **hematoma** (an area of blood and blood clot that can also become infected).
- If hardware is involved (such as plates, screws, or total joint replacements), and the infection is serious, the metal parts may need to be removed.
- Supportive care, including fluids, medications to lower a fever, and pain medication, is often needed. If the infection is severe, a person may require staying in the hospital or even in the intensive care unit (ICU) for treatment.

PREVENTING POSTOPERATIVE INFECTION

A national effort to reduce postoperative infections, sponsored by many organizations involved in surgical patient care and health care quality, the Surgical Care Improvement Program (SCIP) was launched in July 2006. Several steps were recommended, and some extra steps were added later, to help prevent surgically related infections. These include appropriate choice of preoperative antibiotics, proper timing and duration of antibiotic dosing, clipping of hair (instead of shaving) around a surgical incision site, keeping appropriate blood sugar levels for persons with diabetes (especially for individuals having heart surgery), and keeping patients having colon surgery at a normal body temperature.

FOR MORE INFORMATION

- Surgical Care Improvement Project (SCIP)
  www.qualitynet.org
  http://www.jointcommission.org/performancemeasurement/performancemeasurement/scip+core+measure+set.htm
- World Health Organization
  www.who.int
- Agency for Healthcare Research and Quality
  www.ahrq.gov
- American College of Surgeons
  www.facs.org

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Sources: World Health Organization; Centers for Disease Control and Prevention; American College of Surgeons; American Society of Anesthesiologists; Surgical Care Improvement Project; The Joint Commission; Agency for Healthcare Research and Quality

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