Can Postoperative Infection Be Prevented?

Prevention of postoperative infection continues to be a major goal for all surgeons. Even though numerous studies have demonstrated that administering a single dose of antibiotic preoperatively reduces the incidence of postoperative infection, there still is significant morbidity and mortality associated with pelvic surgery. Why patients fail antibiotic prophylaxis has not been an area that has received much attention.

Many studies have demonstrated a direct relationship between bacterial vaginosis and postoperative pelvic infection. Perhaps preoperative evaluation of the patient should include an analysis of the microbiology of the lower genital tract, within two weeks of performing surgery. This would allow, at the least, time to try to re-establish a healthy vaginal microflora.

The numbers of bacteria involved when a patient has bacterial vaginosis are extremely high; therefore, the inoculum is high and can overwhelm the antibiotic administered for prophylaxis. The level of antibiotic is likely to decrease rapidly when the patient received a considerable volume of intravenous fluids, which significantly increases in urine output, possibly resulting in a decrease in the serum antibiotic level. In addition, significant blood loss also decreases the serum antibiotic level.

Prophylactic antibiotics are effective in the patient who is not infected and whose vaginal flora is "normal." Correction of the vaginal microflora is less costly than treating a patient with a postoperative pelvic infection.

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