Delay of hospital discharge secondary to postoperative fever—Is it necessary?

James Fanning, DO
Janice Brewer, MD

Although postoperative fever is common after major gynecologic surgery, the majority of patients have no identifiable infectious or pathologic etiology. Traditional management has been to delay hospital discharge until the patient is afebrile. The authors evaluate the outcome of patients discharged with postoperative fever after major gynecologic surgery. In a retrospective review of 537 women undergoing major gynecologic surgery, 211 (39%) had postoperative fever. The authors identified all patients who were discharged despite having a temperature of 38°C or higher (≥100.4°F) in the preceding 12 hours. All outpatient and inpatient records for a period of 30 days were reviewed.

Thirty-eight (18%) of 211 patients who were febrile postoperatively were discharged despite having a fever within the preceding 12 hours. One patient was lost to follow-up. Two (5%) of 37 patients had a documented infection (one urinary tract infection and one postoperative wound infection). Four (11%) were readmitted within 30 days for noninfectious causes. None of the patients discharged on oral antibiotics had an antibiotic-related complication. Eighty-four percent of patients discharged with a postoperative fever did not have a documented infectious or pathologic cause for the fever while at home.

(Key words: discharge planning, febrile discharge, patient discharge, postoperative care, postoperative fever)

Postoperative fever is common after major gynecologic surgery, with rates reported at 32% to 52%. In a recent retrospective review of 537 consecutive patients undergoing major gynecologic surgery, one of the authors reported that 92% of patients with postoperative fever had no identifiable infectious or pathologic cause for the fever. This may be because basic science research has shown that postoperative release of cytokines is a major cause of postoperative fever and the routine use of preoperative prophylactic antibiotics has significantly decreased the incidence of operative site infections. Even among patients with no identified source of infection, traditional management has been to delay hospital discharge until the patient has been afebrile for 12 to 24 hours.

Because of increasing pressure for cost containment through early postoperative discharge, some physicians have deviated from this traditional method of delaying discharge until postoperative fever has resolved. The object of this study was to evaluate if patients discharged with postoperative fever later had postoperative infections, required hospital readmission, or had antibiotic-related complications. This is the first evaluation of the outcome of patients discharged with postoperative fever after major gynecologic surgery.

Materials and methods
We conducted a retrospective analysis of all 537 major gynecologic surgeries done from January 1995 through January 1996. Major gynecologic surgical procedures included abdominal hysterectomy, vaginal hysterectomy, laparotomy, operative laparoscopy, hysterectomy with lymphadenectomy, ovarian cytoreduction, radical hysterectomy, and vulvectomy. No patients were excluded. Two hundred eleven (39%) of these patients had postoperative fever. Of this group of 211 patients, we identified all patients who were discharged despite having a temperature of 38°C or higher (≥100.4°F) in the preceding 12 hours. All outpatient and inpatient records for 30 days postdischarge were reviewed. Selection of patients to be discharged while still febrile and selection of patients to be discharged on oral antibiotic therapy was the preference of the private practice clinical faculty and not based on prospective criteria.

Results
Of the 211 patients who had postoperative fever after major gynecologic surgery, 38 (18%) were discharged from the hospital despite a fever within the preceding 12 hours. One patient was lost to follow-up. Median maximum temperature within the 12 hours before discharge was 38.2°C (range; 38.0°C to 38.8°C). Median age was 44 years (range; 25 years to 72 years). Surgical procedures included hysterectomy in 12 (33%) patients, laparotomy or operative laparoscopy in 9 (23%) patients, and vaginal hysterectomy in 17 (44%) patients.
Twenty (53%) patients had evaluation of their fever by urine culture, blood culture, and/or chest radiograph while hospitalized. Two (5%) of 37 patients were treated in the hospital for an infection (one for urinary tract infection, one for pneumonia), though neither patient had an infection after discharge from the hospital, nor were they readmitted to the hospital. Nineteen (50%) of 38 patients were discharged on oral antibiotic therapy.

After hospital discharge, 2 (5%) of 37 patients had a documented infection (one urinary tract infection and one postoperative wound infection). Neither patient was discharged on oral antibiotic therapy. Four (11%) of 37 patients were readmitted within 30 days: 2 patients were readmitted for ileus, which was resolved with conservative management; 1 patient was readmitted for small bowel obstruction; and 1 patient was readmitted for ureteral obstruction. Two of these four patients were originally discharged on oral antibiotic therapy while febrile. No patient discharged on oral antibiotic therapy had documented antibiotic-related complications.

Conclusions

In our retrospective study of 211 cases of postoperative fever after major gynecologic surgery, 92% of patients had no infections or pathologic processes diagnosed while in the hospital, even with 37% of febrile patients having blood cultures, 50% having urine cultures, and 26% having chest radiographs. Of this group of 211 patients, 18% were discharged having a fever within the preceding 12 hours. Despite deviation from traditional postoperative fever management, only 5% had a documented infection. There was no difference in the incidence of infection in patients discharged on oral antibiotic therapy (0%) versus those discharged without oral antibiotic therapy (10%) (P = .46). Similar to inpatients with postoperative fever, the majority of patients discharged while febrile had no infectious process diagnosed while at home. However, 11% were readmitted for noninfectious complications, a rate that appears high. In a Medline search from 1966 to 2002, we were unable to locate any studies evaluating the outcome of patients discharged while still febrile after major gynecologic surgery.

In conclusion, 95% of patients discharged with postoperative fever did not have a documented infection while at home; however, 11% were readmitted for noninfectious causes. Because our study was retrospective and contained a small number of patients, no definite conclusions can be made. We suggest that further studies should be done to evaluate the safety of discharge with postoperative fever after major gynecologic surgery.

It is our opinion that it is safe to discharge patients with postoperative fever if there are no abnormalities found in the medical history or on physical examination. It is also our opinion that oral antibiotic therapy is not required at the time of discharge for postoperative febrile patients with no abnormalities on history or physical examination. Because of the high readmission rate (11%), however, we suggest that frequent postdischarge office evaluations should be done.

References