Levofloxacin and Hypoglycemia

To the Editor—Levofloxacin has been previously reported to cause hypoglycemia in 4 patients [1–4]. In 2 of these instances, delays in recognizing the etiology of the hypoglycemia led to unfortunate consequences [1, 3]. An elderly surgical patient in our care recently died of recurrent hypoglycemia induced by levofloxacin. This prompted us to undertake a questionnaire survey of clinicians in our hospital, which is a university-affiliated teaching hospital. We queried them on the frequency of prescriptions for levofloxacin and gatifloxacin, the indications for their use, whether they were aware of its hypoglycemic adverse effects, and whether they could recall any unexplained hypoglycemic events in patients receiving levofloxacin or gatifloxacin in the previous 6 months.

Ninety-seven completed questionnaires were obtained from 138 clinicians. Most (37 of 97) were received from clinicians in internal medicine and its allied specialties. Others were from specialists in surgery (26), gynecology (13), critical care (9), orthopedics (8), and otolaryngology (4). More than 58% of respondents prescribed levofloxacin at least once in the preceding month, and ~19% were considered heavy prescribers (>3 prescriptions/week). Gatifloxacin had been prescribed by 72% of respondents in the previous month, and 14% were considered heavy prescribers. The most common reason for prescribing levofloxacin and gatifloxacin was lower respiratory infection (42%) and urinary tract infection (30%), respectively. Seventy-nine respondents (80.4%) were unaware that levofloxacin could cause hypoglycemia. More strikingly, 17 (94.4%) of the 18 heavy prescribers of levofloxacin (all of whom were from internal medicine and allied specialties) were unaware that it could cause hypoglycemia. There was a better awareness about the potential adverse effect of hypoglycemia for levofloxacin among surgical colleagues because of the recent death of a surgical patient caused by levofloxacin-induced hypoglycemia. With regard to gatifloxacin, the 14 heavy prescribers were distributed across all departments, and 8 (57.1%) of the 14 were aware of the possibility of hypoglycemia. Six respondents (6.2%) could recall unexplained hypoglycemia in patients receiving levofloxacin, and 14 (14.4%) of 97 could recall hypoglycemic episodes in patients receiving gatifloxacin in the preceding 6 months.

This survey reveals that both levofloxa-