

Back to the Future: Intraoperative Fluid Restriction in Gastrointestinal Surgery—A New Practice to the West, but an Old One to Sub-Saharan Africa

To the Editor:

In his article, Joshi (1) suggests benefits of intraoperative fluid restriction in gastrointestinal surgery. We would like to report our own experience with perioperative fluid management in abdominal surgery in a referral hospital in Goma, the Democratic Republic of Congo in Africa.

During the period from January to June 2005, a total of 69 abdominal surgeries were performed. Full data sets were available for 45 patients (65.2%) older than 16 yr who were enrolled into the analysis. Thirty-four patients (75.6%) were female. Mean age was 33 ± 11 yr. Table 1 presents details on intraoperative data and postoperative complications. Although most patients were dehydrated before surgery as a result of nonexistent prehospital medical care, the amount of fluids given during surgery was low.

Although lower amounts of fluids during abdominal surgery have been reported (2), intraoperative fluid balance in our analysis was comparable to that reported by Kita et al. (3). When

Table 1. Intraoperative Data and Postoperative Complications

	Mean ± SD	Range
ASA classification	2.2 ± 0.6	1-3
Preoperative fasting period (h)	9.7 ± 5.2	1-18
Duration of surgery (min)	144 ± 80	45-462
Total amount of fluids (mL)	1424 ± 626	490-2800
Crystalloids (mL)	1219 ± 533	490-2800
Colloids (mL)	483 ± 41	400-500
Blood (mL)	474 ± 157	250-850
Hourly amount of fluids (mL)	593 ± 261	204-1167
Number of patients receiving colloids (n/%)	6/45 (13.3)	
Number of patients receiving blood (n/%)	13/45 (28.9)	
Estimated blood loss (mL)	376 ± 324	30-1590
Total urine output (mL)	490 ± 265	160-1400
Intraoperative balance (mL)	558 ± 416	-45-1634
Postoperative complications (n/%)	12/45 (26.7)	
Wound infection (n/%)	4/45 (8.9)	
Anemia (n/%)	2/45 (4.4)	
Hemorrhage (n/%)	1/45 (2.2)	
Anastomotic leakage (n/%)	1/45 (2.2)	
Paralytic ileus (n/%)	2/45 (4.4)	
Urinary tract infection (n/%)	1/45 (2.2)	
Peritonitis (n/%)	1/45 (2.2)	
Hospital length of stay (days)	9.2 ± 5.7	3-28
Survival (n/%)	44/45 (97.8)	

ASA = American Society of Anesthesiologists.
Anemia was defined as a hemoglobin concentration <10 g/dL with clinical signs of anemia.

compared with studies evaluating restrictive intraoperative fluid strategies in abdominal surgery (4,5), hourly fluid administration was substantially lower in our patient population, even though intraoperative blood loss was higher than reported in other studies (2-5). This is likely because electrocoagulation was not available for most surgical procedures. Despite restricted use of intraoperative fluids, all patients had adequate urine output, and postoperative complications were rare. In view of highly limited logistical and infrastructural resources, the hospital mortality of our abdominal surgical patient population (2.2%) is very low for a sub-Saharan African setting (6).

Perioperative fluid restriction is a common practice in most sub-Saharan countries. Important reasons include limited hospital resources, patient inability to pay for hospital supplies, disruption of hospital services by war, and the demands placed by occasional epidemics. Because the presented hospital is supported by a Western organization and can therefore compensate for limited financial resources of individual patients, it is likely that intraoperative fluid therapy is even more restrictive in other sub-Saharan hospitals that do not receive external support.

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Efficacy of Postoperative Epidural Morphine for Postpartum Tubal Ligation

To the Editor:

Marcus et al. (1) suggest that postoperative pain relief is better in patients undergoing postpartum tubal ligation when epidural morphine is administered, as also suggested by Campbell et al. (2). There are several drawbacks to the use of epidural morphine in these patients. Most significantly, epidural morphine is associated with delayed respiratory depression, which may appear up to 24 h after administration. With increasing pressure on hospitals to limit the duration of stay of patients, postpartum patients undergoing tubal ligation the day after delivery are commonly discharged on the same day as the surgery. Such patients should not receive epidural morphine, as they will not be adequately monitored for ventilatory depression. There might be a case for epidural morphine if there were no acceptable alternatives and if all such patients remained in hospital for 24 h after their procedure. However, there are numerous alternatives, including infiltration by the obstetricians with local anesthetic, IV agents such as ketorolac and short-acting opioids, and traditional oral analgesics. More than 75% of such procedures worldwide are done using local anesthesia alone (3). In our view, epidural