Fasting guidelines for laboring patients

•Solid food

Gastric emptying of solid foods during labor is delayed, and intake should be avoided, especially when parenteral or neuraxial opioids are given.

Whether epidural analgesia changes gastric emptying during labor is unclear. A theoretical but unproven mechanism for enhanced gastric emptying in parturients with epidurals is reversal of the pain-related decrease in gastric motility.

In an observational study including 40 patients, 10 each of nonpregnant controls, third trimester nonlaboring patients, laboring term parturients without analgesia, and term parturients with labor epidural analgesia (ropivacaine with sufentanil), gastric emptying of a light meal (125 g of yogurt) was assessed by gastric ultrasound [45]. Gastric emptying was delayed in pregnant patients compared with nonpregnant controls and was further delayed in parturients in labor. However, gastric emptying was faster in patients with epidural analgesia than in laboring patients without analgesia (median gastric emptying fraction at 90 minutes 31 versus 7 percent). Of note, rates of emptying varied significantly among patients; at 120 minutes, there was food in the stomach in one nonpregnant patient, two pregnant nonlaboring patients, four patients with epidural analgesia, and nine laboring parturients without analgesia. Conclusions from this study are limited by the small study size, and may not be generalizable due to the low body mass index (BMI) of the studied patients (21 to 23 kg/m2), and exclusion of patients who did not have an empty stomach at the time of recruitment. In addition, the effects of epidural opioids may not have been apparent with the limited study duration.

The utility of gastric ultrasound for assessing stomach emptying in pregnant patients has not been established and may be limited by lack of expertise and difficulty obtaining adequate visualization in pregnant patients with higher BMIs.

•**Clear liquids**

Oral intake of clear liquids in labor has been liberalized and the 2016 American Society of Anesthesiology (ASA) practice guidelines for obstetric anesthesia and the American College of Obstetricians and Gynecologists (ACOG) committee opinion endorse a moderate amount of clear liquid intake for uncomplicated laboring patients [46,47]. In the authors' practice, we limit parturients to eight ounces of clear liquids per hour after the placement of an epidural; further restrictions, based on an individual patient's aspiration risk, are left to the discretion of the managing clinician. Patients with increased risk factors for aspiration (eg, severe obesity, diabetes, difficult airway) or patients at increased risk for operative delivery (eg, pre-eclampsia, multiple gestations) may require further restrictions of oral intake, which is determined on an individual basis.

In one study, 125 parturients who had epidural labor analgesia were randomly assigned to either fasting, or to drink up to 400 mL of apple juice over 90 minutes, after which stomach emptying was assessed with gastric antral cross section using ultrasound. Gastric cross sectional area was similar in the two groups [48]. However, caution must be exercised in applying the study findings to the general patient population, as it excluded women with diabetes mellitus, hypertension, prior gastric surgery, or active labor, and the average body mass index was 27 kg/m2.