



Correspondence

Stomach content and ultrasound technology in appendicitis

To the Editor:

Ultrasound technology is very useful for nerve blocks [1]. However, it is more than an instrument to guide nerve block. Rapid diagnosis of bladder volume, pneumothorax, cardiac tamponade, and pleural effusion can be made by ultrasonography, and intravenous and arterial access can be facilitated [2]. Another use is evaluation of stomach content [3]. Good correlation between scintigraphy, the “gold standard” to measure gastric content, and ultrasonography has been shown [4]. Appendicitis is a frequent problem in which ultrasonography is already used as a diagnostic tool. We used it to evaluate the stomach contents of 60 patients with that diagnosis.

The study was prospective and was approved by the research ethic committee of the University of Sherbrooke Hospital. Informed consent was obtained from all 60 patients entered into the study. A total of 46 adults and 14 children (<12 yrs of age) were examined. Gastric examination was done at the time of the appendix examination. A full stomach diagnosis signified that the stomach contained liquids and/or solids, and an empty stomach signified the absence of liquids or solids. When liquid was present, its volume was evaluated as small, medium, or large. Patients were also questioned about the duration of their fasting time and the presence of nausea, anxiety, hunger, or gastroesophageal reflux. Fasting time was arbitrarily reported as less than 8 hours, between 8 and 12 hours, and more than 12 hours.

Thirty-seven patients had an empty stomach, 16 had liquids, and 7 had solids. Forty-three patients had a fasting time greater than 12 hours, one patient fasted between 8 and 12 hours, and 7 fasted less than 8 hours. For the three fasting periods, the ratio of full stomach over fasting time was 11 of 43 patients, 6 of 10 patients, and 5 of 7 patients, respectively. The volume of liquid was small in 11 patients and medium in 5 patients.

Full stomach content (>0.4 mL/kg) is an important concern for anesthesiologists, especially if a difficult

endotracheal intubation is anticipated. It is useful to know if there is liquid (cystic appearance) or solid (white opaque appearance) in the stomach. Seven patients had solid gastric contents and, when liquid was present, the amount of fluid was more than the critical gastric content of 0.4 mL/kg. Our work confirms that patients with the diagnosis of appendicitis often have a full stomach (61%) and that the longer the fasting time, the lower this probability.

In conclusion, ultrasound technology allows us rapidly to evaluate stomach content in patients with appendicitis.

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