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### Comment on Hamada et al.: Ultrasound assessment of gastric volume in critically ill patients

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Dear Editor,

We read with great interest Hamada et al.'s article [1] on ultrasound assessment of gastric volume in critically ill patients. Their study population comprised mostly trauma patients (49 %) and patients with abdominal diseases (9 %). Additionally, patients in whom the gastric volume measurements were performed with ultrasonography (USG) were trauma patients or they had suspected abdominal pathology so they were scheduled to have a computed tomography (CT) scan.

In this study by Hamada et al., gastric volume assessment with CT

scanning after USG assessment took 23–44 min (mean 31 min). The gastric emptying time for liquids in healthy people is approximately 12 min and for solid food it is approximately 2 h depending on the food contents [2, 3]. Because of the time period between USG assessment and CT scanning, a disparity is expected to occur between the measurements; however, in Hamada et al.'s study there is a consistency between the measurements that can be attributed to the study population being intensive care unit patients with delayed gastric emptying [4, 5].

As was mentioned above, in the study by Hamada et al., the patients who underwent a CT scan were suspected of having an abdominal pathology. Patients were assessed with the simplified acute physiology score II (SAPS II) (IQR 17–57) and injury severity score (ISS) (IQR 11–57). However in the article there is no information about the CT determinations. The abdominal pathology of patients and its severity are not mentioned in the article. We can not estimate how these abdominal pathologies can effect gastric emptying with these SAPS II and ISS scores.

In conclusion, Hamada et al.'s study is worthy because of its patient population being intensive care unit patients, especially trauma patients which have not been studied before.

In other studies of the gastric volume assessment with USG, healthy volunteers were assessed. If the present pathologies of these intensive care unit patients are classified and the effect of these pathologies on the gastric emptying is assessed, in our opinion the effective use of USG for gastric volume measurement may improve.

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