



## Investigation of gastric emptying rate by ultrasonography

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### Abstract

**AIM:** Although there were various methods for the investigation of gastric emptying their clinical applications were greatly limited because of their invasiveness or nonphysiological characters. Therefore, it is necessary to establish an accurate, safe, noninvasive and convenient method to determine gastric emptying rate for clinical usage.

**METHODS:** After taken a semi liquid test meal containing mainly sesame paste (304 Kcal, 500 mL), 19 patients with FD were examined by both scintigraphy and ultrasound (Antral volume

method) simultaneously to determine gastric emptying rates and comparison of their correlation and advantages between each other.

**RESULTS:**  $73.00 \pm 20.04$  min of GET 1/2,  $153.88 \pm 37.10$  min of GET was found in former and  $67.33 \pm 21.20$  min of GET 1/2,  $144.30 \pm 33.489$  min of GET in latter. No significant difference could be found between these 2 methods ( $P > 0.05$ ). The correlation of both gastric emptying rated at different time interval was analyzed. The result showed  $r = 0.9981$ ,  $P < 0.001$ , implying an excellent correlation between 2 methods.

**CONCLUSION:** It indicated that semi liquid black sesame paste meal is an ideal test meal for both scintigraphic and ultrasonographic measurements of gastric emptying at the same time. The ultrasound gastric emptying determination supplies some quantitative data to reevaluating gastric emptying and can be used for evaluating the effectiveness of medication in dyspepsia.

**Key words:** Gastric emptying; Ultrasonography

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