Reproducibility and Normal Ranges for Gastric Emptying Time in Normal Volunteers Using a Test Meal Designed for Postoperative Patients

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Background
- While radionuclide scintigraphy is the current gold standard for quantification of gastric emptying, results vary with meal composition

Aims
- Test the reproducibility of the method,
- Obtain normal ranges for males and females, and
- Compare the results with historical data using a bulkier meal (Kong et al. 1998)

Methods
- 10 healthy male and female volunteers fed Meal A, compared with ten historical male volunteers fed Meal B
- Meal A: Single 60g pancake labelled with 3MBq 99mTc + 100 ml water labelled with 0.5MBq 111In-DTPA
- Meal B: Two 60g pancakes + 200 ml milkshake labelled with same radioisotopes (Kong et al. 1998)
- Each volunteer studied fed meal twice (Test 1 and Test 2) 7-10 days apart
- 30 s anterior and posterior images with gamma camera every 20 min for 3 h
- The time for 50% emptying ($T_{50}$) was derived from time-activity curves

Conclusions
- The modified test meal gave reproducible results in healthy volunteers, with solid phase emptying differing from historical data obtained using a bulkier test meal.

Reference

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