

Appendix 1

Adult solid meal gastric emptying scintigraphy protocol

Based on Thailand adult solid meal gastric emptying scintigraphy protocol and SNM Procedure Guideline for Adult Solid-Meal Gastric-Emptying Study 3.0

Meal preparation (Thailand adult solid meal gastric emptying scintigraphy protocol)

1. Mix 500 mCi of ^{99m}Tc -phytate with whole egg (size 65-70 g), 10 ml of vegetable oil and 10 ml of water.
2. Cook the mixtures in the microwave for 2 minutes.
3. The meal can be eaten with 100 g of rice and 100 ml of water.
4. The time required for eating the meal should be less than 10 minutes.

Patient preparation

1. The patient should take nothing by mouth within 6 hours before initiation of the study.
2. The patient should be advised to avoid smoking the day before the study.

Image acquisition (SNM Procedure Guideline for Adult Solid-Meal Gastric-Emptying Study 3.0)

1. The patients are in supine position.
2. Images are obtained by Philips Skylight gamma camera using low-energy high-resolution collimator. A 128x128 word-mode image matrix is used. The photopeak settings are 20% at the 140-keV peak for ^{99m}Tc .
3. Anterior and posterior planar images including distal esophagus, stomach and proximal small bowel in field of view will be obtained for 1 minute immediately after meal ingestion.
4. The repeated image in the same projection for 1 minute will be obtained at hourly interval (60, 120, 180 and 240 minute).

Processing

1. All data will be processed by Philip-Jetstream workspace.
2. The radioactive decay must be corrected.
3. A region of interest (ROI) is drawn around the tracer activity in the stomach. A time-activity curve and fit curve will be displayed.
4. Gastric emptying half time ($T_{1/2}$) and percent meal retention at 120 minutes will be calculated.

Appendix 2

GI symptom scores

Severity scale will be graded from 0 to 3.

- Grade 3: symptoms significantly interfere with daily activities
- Grade 2: moderate bothersome
- Grade 1: mild or little bothersome
- Grade 0: no symptoms

Frequency scale will be graded from 0 to 3.

- Grade 3: nearly continuous symptoms, daily
- Grade 2: several times a week
- Grade 1: once a week
- Grade 0: no symptoms