

MECKEL'S DIVERTICULUM STUDY
UPDATED: APRIL 2010

CPT CODE: 78290

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- Indications:** To establish the presence of Meckel's diverticulum.
- Rationale:** While a Meckel's diverticulum occurs in 1.5-3% of population, clinical symptoms appear in only 25-30% of these patients.
- Patient Prep:** NPO for a minimum of four (4) hours.
- In infants, the NPO period should equal the usual feeding interval. No blocking agent such as KClO₄ or SSKI within previous 48 hours.
- NEWBORNS:** CT scans or contrast studies can affect scan for next 48 hours so Nuclear Medicine should know of such procedures. Pre-treatment with 300 mg (corrected for age) of Ranitine HCl (H₂-receptor antagonist) every 12 hours for 24 hours preceding the study (total 2 doses) has been suggested, and in difficult cases should be considered when repeat studies are contemplated (reduces release of tracer into the bowel). Glucagon, by decreasing peristalsis, may also enhance identification. Pentagastrin can enhance gastric secretion and can be helpful.
- Scheduling:** 60 minutes camera time.
- Radiopharmaceutical & Dose:** 10 mCi \pm 20%(8 to 12 mCi) Tc-99m as pertechnetate injected intravenously. Dose will be adjusted for patient weight per NMIS or weight chart.
- Imaging Device:** Camera with LEHR collimator.
- Imaging Procedure:**
- Ask the patient to void prior to the study.
 - Position patient under camera prior to injection of radiopharmaceutical.
 - Place patient is in a supine position under the camera.
 - Begin imaging immediately on injection of the radiopharmaceutical.
 - Images should include the stomach and bladder area.
 - Images are acquired as follows: Anterior images are obtained dynamically at 1-min per frame for 15 min, then four static images of 500,000 are obtained - 2 anterior, 2 right lateral - one each at 15 and 30 min.
- PACS:** All raw images, including the dynamic images, should be sent to the PACS system. Create a screen cap at the dynamic study and of the statics. Annotate static images. Send both screen caps to PACS.
- Interpretation:** The activity in Meckel's occurs simultaneously with gastric appearance whereas common confusing sites (renal pelvis, inflammatory bowel lesions, intussusceptions, polyps) accumulate later. Sensitivity of 85% and specificity of 95% are reported.
- False Positives:** Barium studies and proctoscopy can also cause false positives. Radiopharmaceutical may be seen in the renal pelvis and duodenum, and these can be difficult to separate. If the right renal pelvis is suspected, then look for the left renal pelvis that will be partially obscured by the gastric activity. Posterior views and 15 min will show the paired nature

of the renal pelvis. Lateral views will help separate duodenum (anterior or mid-abdomen vs posterior kidney).

Comments:

A Nuclear Medicine staff or resident physician should be consulted to determine if additional views are indicated.

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