

Digestive Health Center Of the Four States

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Anorectal Manometry

What is anorectal manometry?

- Anorectal manometry is a test performed to evaluate patients with constipation or fecal incontinence. This test measures the pressures of the anal sphincter muscles, the sensation in the rectum, and the neural reflexes that are needed for normal bowel movements.

Preparation for the procedure

- Give yourself the Fleet enemas before your study. You can purchase the Fleet enemas from your local pharmacy or supermarket.
- You should not eat anything during the two hours prior to the procedure.
- If you are diabetic, this may involve adjusting your medications.
- You may take your regular medications with a small sip of water at least 2 hours prior to the study.

The Procedure

- The test takes approximately 30 minutes. You will be asked to change into a gown. A technician will explain the procedure to you and answer any questions you may have. You will then lie on your left side. A small flexible tube, about the size of a thermometer, with a balloon at the end is inserted into the rectum. The catheter is connected to a machine that measures the pressure. During the test, the small balloon attached to the catheter may be inflated in the rectum to assess the normal reflex pathways. The doctor or technician may also ask you to squeeze, relax, and push at various times. The anal sphincter muscle pressures are measured during each of these maneuvers. To squeeze, the patient tightens the sphincter muscles as if trying to prevent anything from coming out. To push or bear down, the patient strains down as if trying to have a bowel movement. Two other tests may be done. First an anal sphincter electromyography (EMG) is a test to evaluate the nerve supply to the anal muscle. Second a measurement is taken of the time it takes to expel the balloon from the rectum. After the exam, you may drive yourself home and go about normal activities.

Anal Sphincter EMG

- Anal sphincter electromyography (EMG) is recorded with a small plug electrode placed in the anal canal. The patient is asked to relax, squeeze, and push at different times. The anal sphincter muscle electrical activity is recorded and displayed on a computer screen.
- Anal sphincter EMG confirms the proper muscle contractions during the squeeze and muscle relaxation during pushing.

Balloon Expulsion Test

- For this procedure, a small balloon is inserted into the rectum and then inflated with water. The patient goes to the bathroom and tries to defecate (expel) the small balloon from the rectum. The amount of time it takes to expel the balloon is recorded.

What can be learned from an anorectal manometry?

- The anal and rectal area contains specialized muscles that are helpful to regulate proper passage of bowel movements. Normally when stool enters the rectum, the anal sphincter muscle tightens to prevent passage of stool at an inconvenient time. If this muscle is weak or does not contract in a timely way, incontinence (leakage of stool) may occur.
- Normally when a person pushes or bears down to have a bowel movement, the anal sphincter muscles relax. This will cause the pressure to decrease allowing evacuation of stool. If the sphincter muscles tighten when pushing, this could contribute to constipation.
- Anal manometry measures how strong the sphincter muscles are and whether they relax as they should during the passing of stool. It provides helpful information to the doctor in treating patients with fecal incontinence or severe constipation.
- There are many causes of fecal incontinence. Weak anal sphincter muscles or poor sensation in the rectum can contribute to fecal incontinence. If these abnormalities are present, they can be treated. Biofeedback techniques using anal manometry and special exercise of the pelvic floor muscles can strengthen the muscles and improved sensation. This can help treat fecal incontinence.
- There are many causes for constipation. Some involve sluggish movements through the whole colon, whereas others involve the anal sphincter muscles. In some patients with constipation, the anal sphincter muscles do not relax appropriately when bearing down or pushing to have a bowel movement. This abnormal muscle function may cause a functional type of obstruction. Muscles that do not relax with bearing down can be retrained with biofeedback techniques using anal manometry.

Risks of anorectal manometry

- Anorectal manometry is a safe, low risk procedure and is unlikely to cause any pain.
- Complications are rare but include:
 - Perforation or bleeding of the rectum
 - Equipment failure is a remote possibility
 - If you are allergic to latex you need to inform the technician before the test so that a latex free balloon can be used.