PROCEDURES IN MEDICINE

For Medical Students & House Officers

BY

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ACKNOWLEDGEMENT

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Dr Walid Sarfaraz & Dr Raheel Ahmad


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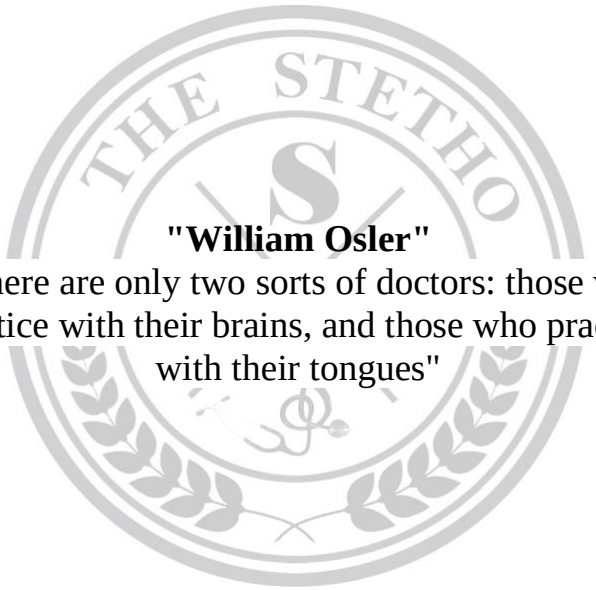

"William Osler"

" There are only two sorts of doctors: those who practice with their brains, and those who practice with their tongues"


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PROCEDURE 1

POUCHOSCOPY

Pouchoscopy: Uses an endoscope to examine a surgically created pouch that serves as a stool reservoir for people whose large bowel has been completely removed.


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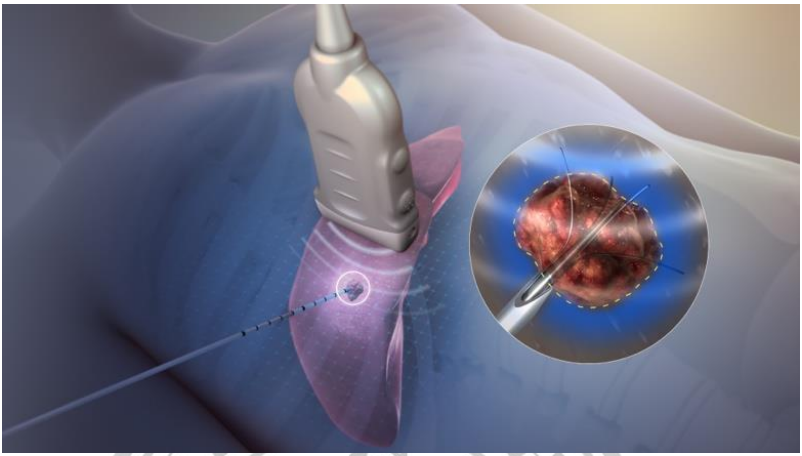
PROCEDURE 2

RFA

Radiofrequency Ablation (RFA): Radiofrequency ablation (RFA) is an endoscopic therapy used primarily to treat Barrett's esophagus.

Ablation is a term that refers to the use of heat to cause tissue death of unwanted tissue. Ablation delivers radiofrequency energy or heat to cause this tissue death. The special device is placed on the end of the endoscope and introduced into the esophagus. The determined area is "burned" at precise time intervals and specific locations to ablate and remove the abnormal and unwanted cells.

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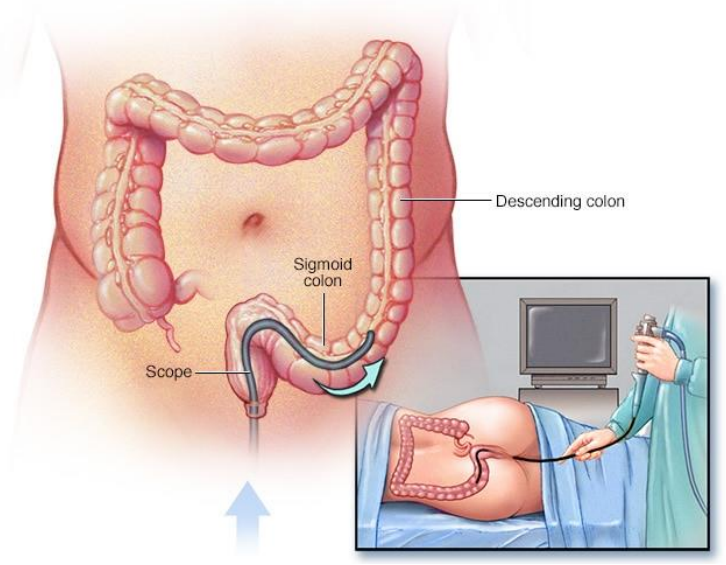
PROCEDURE 3

SIGMOIDOSCOPY

Sigmoidoscopy: Uses an endoscope to examine the lower 20 inches of the colon.

A sigmoidoscopy is a diagnostic test used to check the sigmoid colon, which is the lower part of your colon or large intestine. This section of your colon is close to your rectum and anus. A sigmoidoscopy can help diagnose the following symptoms: Diarrhea. Belly pain.

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PROCEDURE 4

EGD

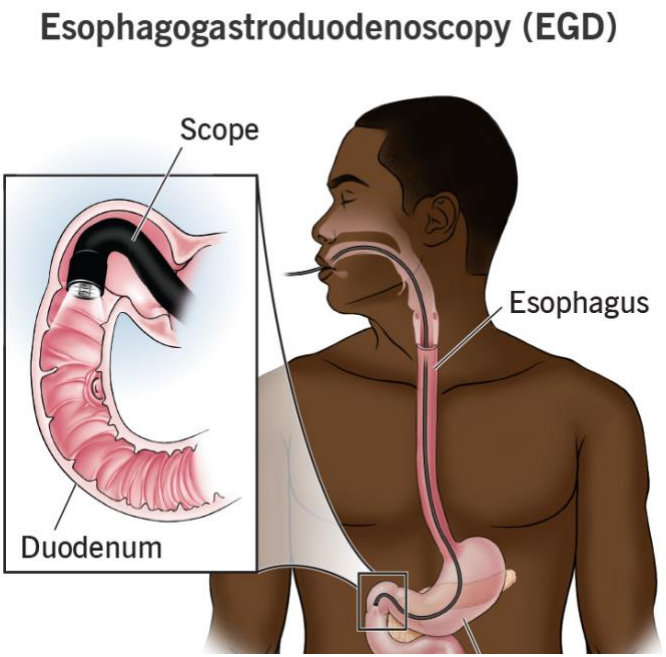
Upper Endoscopy (EGD): Uses a thin, flexible tube with a camera inserted through the mouth, following the tract to the stomach and upper small intestine, to look for bleeding, ulcers and inflammation.

It a procedure for diagnosing and treating problems in your upper digestive system, such as gastroesophageal reflux disease (GERD), blockages, and strictures.

During an upper GI endoscopy, your gastroenterologist will put a thin, flexible viewing instrument (endoscope) into your mouth, slowly slide it down your throat, then through your esophagus and stomach, all the way into your duodenum. Your GI doctor will then perform any or a combination of the following during the procedure:

- Biopsy
- Dilatation of a constricted area

- Removal of objects that may be stuck in your upper GI tract
- Surgery or laser therapy

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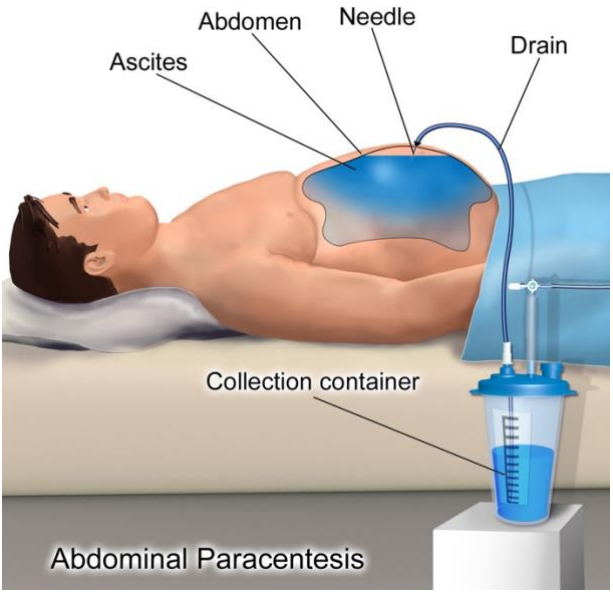
PROCEDURE 5

PARACENTESIS

Paracentesis: A procedure using a needle to drain fluid from the abdomen.

Paracentesis is a procedure in which a needle or catheter is inserted into the peritoneal cavity to obtain ascitic fluid for diagnostic or therapeutic purposes. Ascitic fluid may be used to help determine the etiology of ascites, as well as to evaluate for infection or presence of cancer.

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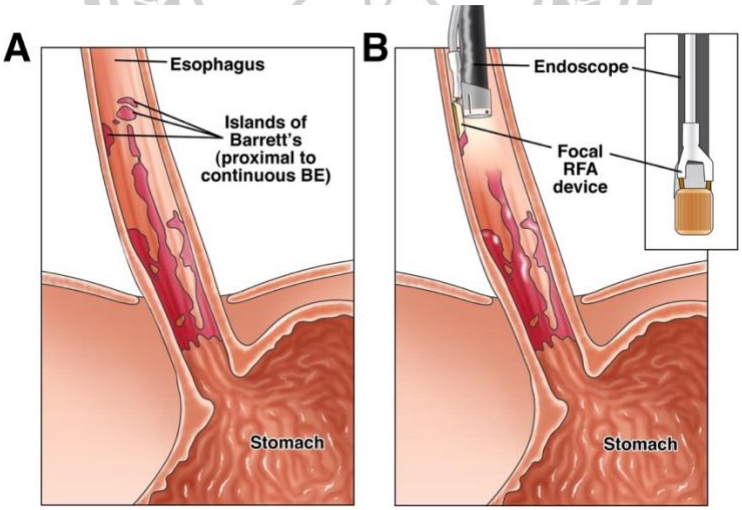
PROCEDURE 6

BEAT

Barrett's Epithelium Ablation Therapy: Uses the advanced HALO system to endoscopically remove diseased tissue from the esophagus of patients with Barrett's Disease.

Ablative therapy for Barrett's esophagus (BE) aims to destroy the abnormal columnar epithelium, allowing for replacement of the esophageal mucosa with neosquamous epithelium. Over the past several years, different techniques have been developed to ablate BE.

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PROCEDURE 7

MICROSCOPY

Confocal Microscopy: An advanced form of imaging using a tiny microscope to perform “virtual biopsies” and other exams, especially useful for patients with Barrett’s Disease and those with narrowing of the bile and pancreatic ducts.

CLE provides diagnostic information at cellular level in real-time. It develops on the background of confocal microscopy, which was introduced in 1957 by Marvin Minsky, to address the practical issue of imaging tissue at different depths below the surface. As such, CLE allows the endoscopist to image gastro-intestinal (GI) epithelia underneath what is conventionally seen with standard and image enhanced endoscopy.


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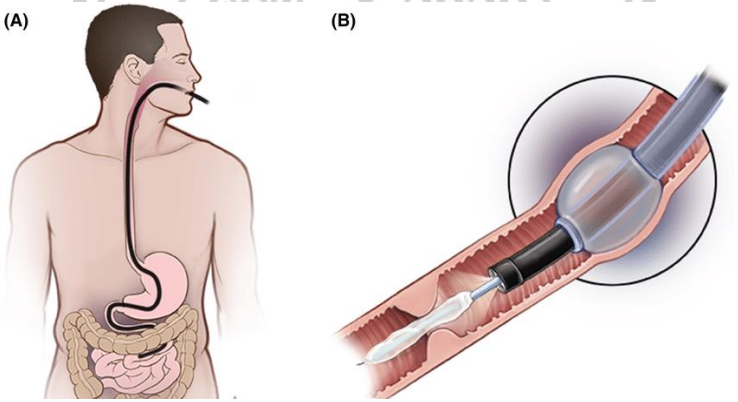
PROCEDURE 8

ED

Endoscopic Dilation: A technique to open a blocked section of the esophagus.

Esophageal dilation is a procedure that allows your doctor to dilate, or stretch, a narrowed area of your esophagus [swallowing tube]. Doctors can use various techniques for this procedure. Your doctor might perform the procedure as part of a sedated endoscopy.

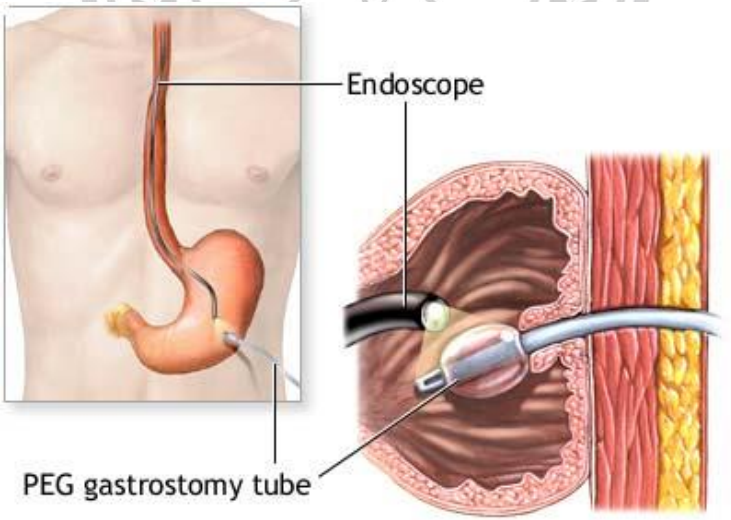


PROCEDURE 9

PEG TUBE

PEG Tube Placement: Using an endoscope to place into the stomach through the skin.

PEG stands for percutaneous endoscopic gastrostomy, a procedure in which a flexible feeding tube is placed through the abdominal wall and into the stomach. PEG allows nutrition, fluids and/or medications to be put directly into the stomach, bypassing the mouth and esophagus.

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PROCEDURE 10

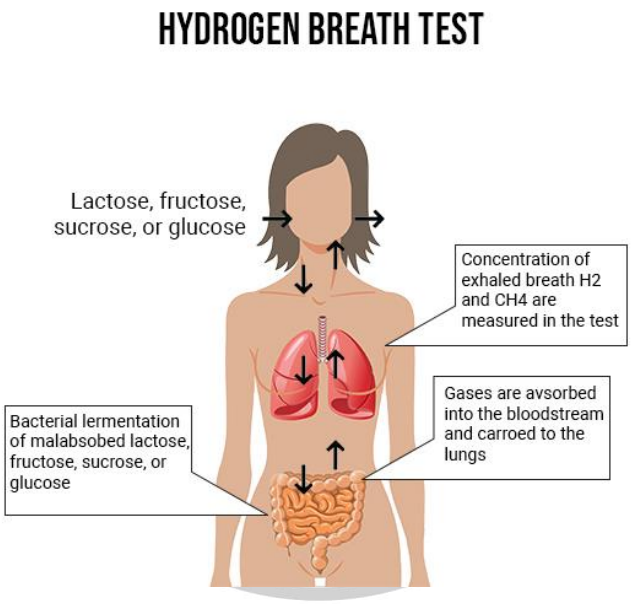
HYDROGEN BREATH TEST

Hydrogen Breath Test: Tests for bacterial overgrowth and intolerance to sugars (fructose, lactose, sucrose).

Many gastrointestinal disorders exhibit similar symptoms, such as gas, bloating, and diarrhea, and are difficult to distinguish. These substances can also be triggers for patients with irritable bowel syndrome or IBS.

Hydrogen breath tests are now available at Manhattan Gastroenterology to help us distinguish some causes of the common gastrointestinal symptoms. These tests are useful to diagnose lactose intolerance, fructose intolerance, sucrose intolerance, and small intestinal bacterial overgrowth (SIBO). SIBO affects the small intestine and occurs when bacteria that normally grow in the colon begin to grow in massive amounts in the small intestine.

By simply testing the breath of our patients after ingesting certain substances, we can help diagnose these conditions, which may be triggers for their symptoms.

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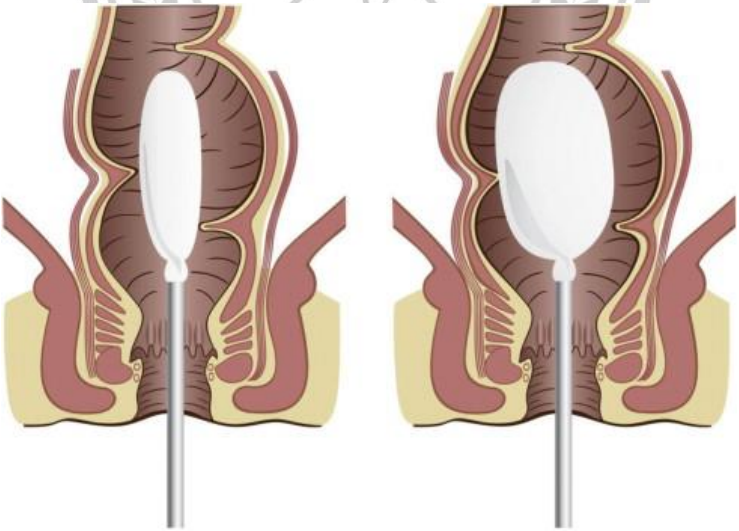
PROCEDURE 1

ANORECTAL MANOMETRY

Anorectal Manometry: Detects problems with bowel movement by measuring the tone in the anal sphincter and rectal muscles.

Anorectal manometry is a test that measures how well the rectum and anal sphincters work together to eliminate stool (feces). The anal sphincter has an internal and external sphincter, or valve, which helps to control continence (passing) of stool.

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PROCEDURE 12

pH MONITORING

Esophageal 24-hour pH Monitoring: During a 24-hour period, both acid and non-acid reflux is monitored in the esophagus.

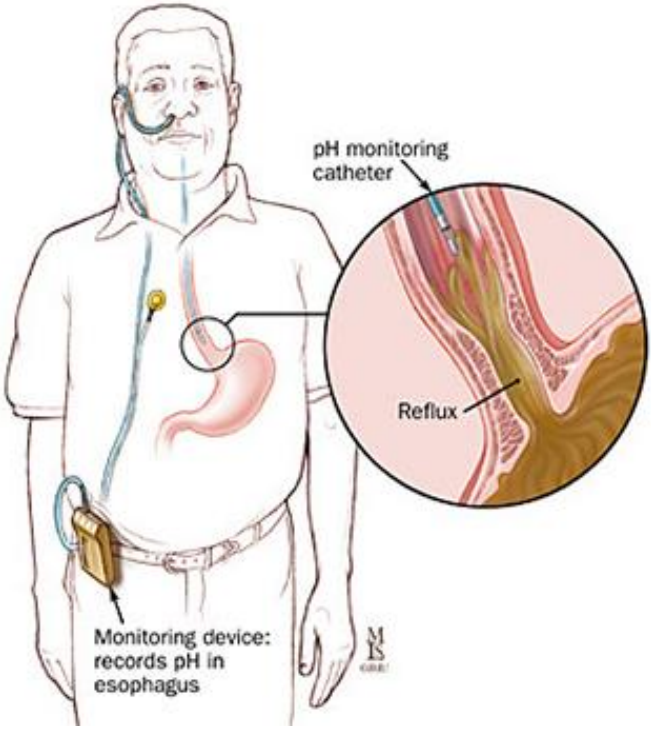
24-hour pH monitoring is a test to assess whether acid is coming back into the esophagus from the stomach causing pain, nausea, heartburn, and chest pain. This test involves placing a narrow flexible tube through the nose into the esophagus. Before the test, the nose is numbed with a local anesthetic gel.

A catheter is inserted into your esophagus through the nasal cavity as you keep sipping some water. The tip of the catheter is acid-sensitive so it can easily measure the acid reflux. The catheter is attached to a data recording device that you will generally wear over your waist.

You must ensure that you haven't consumed any food or drinks before the 24 hour-pH study. Antacid medications are also strictly prohibited before the surgery. The gastro doctor will inform you when to stop any reflux medications you are taking. It is important that you continue your normal routine so that the acid reflux measure can be as accurate as possible. After the 24-hour pH monitoring phase ends, the catheter is removed from your esophagus. This common procedure records only acid reflux.

24-hour pH Impedance Monitoring: When the reflux is non-acidic or in the form of gas, this particular pH monitoring technique is used. The catheter simply records the fluid that is refluxing by noting the electrical resistance changes around the catheter. This 24 hour-pH

impedance monitoring technique is particularly useful for those who cannot stop antacid medications.

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PROCEDURE 13

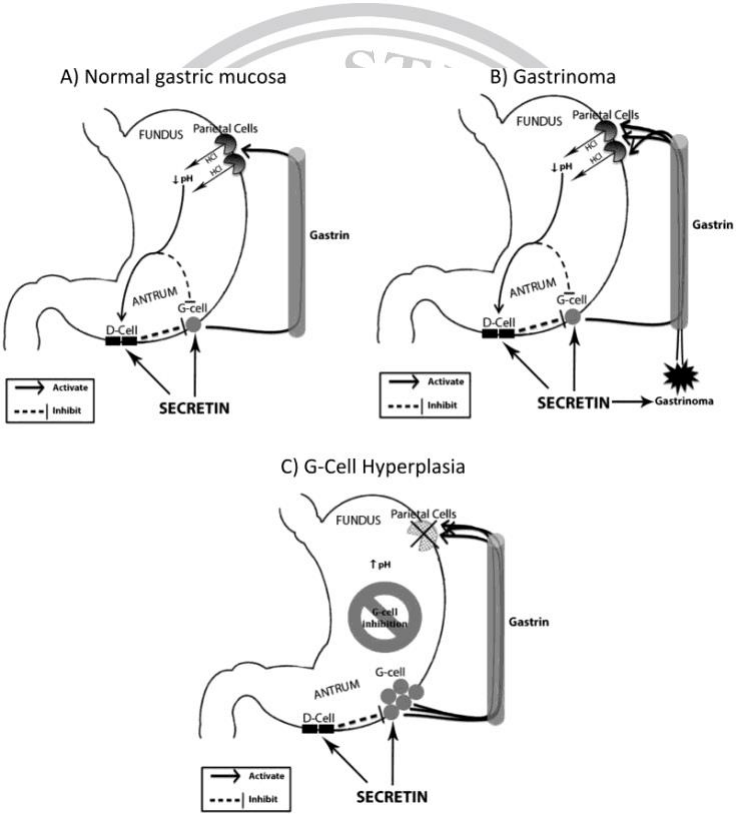
SST

Secretin Stimulation Test: Measures the ability of the pancreas to respond to secretin, a digestive hormone.

Secretin stimulation test is a test that measures the ability of the pancreas to respond to secretin. Secretin is a hormone secreted by the small intestines in the presence of partially digested food from the stomach; this hormone normally stimulates the pancreas to secrete a fluid with a high concentration of bicarbonate. This fluid neutralizes the acidity from the stomach that is necessary for a number of enzymes to function in the breakdown and absorption of food.

In order to perform the test a tube is passed through the nose into the stomach then into the duodenum. Secretin is administered and the contents of the duodenal secretions are aspirated and analyzed over a period of about 2 hours.

People with diseases involving the pancreas, such as chronic pancreatitis, cystic fibrosis, or pancreatic cancer, may have abnormal pancreatic function.

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PROCEDURE 14

MOTILITY STUDIES

Gastrointestinal Motility Studies: Exam to look at how the stomach and upper small intestinal muscles contract.

Small bowel manometry is a motility test that uses a catheter (thin tube) with pressure sensors to record the contractions of the GI tract. Before the tube is passed, the inside of your nose is numbed and an anesthetic spray or gargle will be used to numb the back of your throat.

The catheter containing the pressure sensors is then passed through the nose and into the stomach and small intestine.

Proper positioning of the catheter is assisted and confirmed by either X-ray fluoroscopy (an imaging technique that captures real-time objects with X-ray) or endoscopy with conscious sedation, which blocks pain and allows you to relax without full sedation.

During the test, special meals will be given to determine how food affects GI tract motility. Usually, ingesting food increases the gastric and small bowel contractions. The first meal with the catheter is usually given in the late morning and is often an egg sandwich and water.

Since X-rays are used to place the catheter, this test should not be done if you could be pregnant. Women will need to give a urine sample in the morning of the test for a pregnancy test.