Gastroscopy (esophagogastroduodenoscopy)

Basics

Gastroscopy is the endoscopic examination of the upper part of the gastrointestinal tract: the esophagus (gullet), the stomach and the duodenum. We perform painless gastroscopy under sedation. Usually gastroscopy lasts 15-20 min. During the endoscopy our anesthesiologist monitors your blood pressure, heart rate and breathing.

Indications

Gastroscopy indications include reflux symptoms, abdominal pain, bleeding, nausea and vomiting. Patient scheduled for an antireflux surgery should undergo preoperative gastroscopy for the exclusion of abnormalities (inflammation, hiatal hernia, tumor, ulcer, varices). Persons with a history of colonic (large bowel) polyps should undergo gastroscopy for the exclusion of Barrett’s esophagus. There exists a 25% positive correlation between colonic polyps, Barrett’s esophagus and vice versa). Going in line with recent studies we recommend screening gastroscopy for the exclusion of premalignant Barrett’s esophagus for men and women at the age of 40.

The technology

Gastroscopy uses a flexible endoscope for the examination of the esophagus, stomach and duodenum. The endoscope is connected to the video tower (light source, video screen). The endoscopic images are followed on a high-resolution video screen. Data, images and videos are stored on a computer. The endoscope includes a working channel for the introduction of instruments (biopsy forceps, electro cautery devices for cutting and resection).

Preparation

Gastroscopy (esophagogastroduodenoscopy) is conducted after 6 hours fast. Otherwise gastric content (food, secretions) will impair the vision to the tissue. If the gastroscopy is scheduled for the afternoon the patient is allowed to take the morning medications (hormones, heart, blood pressure medications). If the gastroscopy is planned before 12 a.m. patients should not take hormones, heart, blood pressure medications. Our anesthesiologist will administer the drugs during the sedation.

Gastroscopy

We conduct gastroscopy under sedation and left lateral body position. The mouth and throat is sprayed with a local anesthetic. Then the endoscope is introduced via the mouth into the esophagus (gullet) and forwarded through the stomach into the duodenum. During the examination we insufflate via the endoscope to extend the gut for optimal vision to the mucosa. After the inspection of the duodenum we examine the stomach. Thereafter we examine the esophagogastric junction and the esophagus. Thus we assess the presence or absence of hiatal hernia. During the examination we obtain tissue samples (biopsies) from the duodenum, the stomach and the esophagus. In addition we obtain measured multi level biopsies from the esophagogastric junction. Correlation of the biopsy location and the histopathology (pathology report) allow assessment of the dimensions of the dilated distal esophagus
(cardia). In addition we biopsy sample the junction between the normal and the abnormal mucosa of the esophagus for the exclusion of Barrett’s esophagus. Finally we examine the esophagus for inflammation, diverticula, rings, webs, stenosis, ulcer and tumor. We always obtain biopsies from any abnormal areas. Before retrieval of the endoscope we aspirate the inflated air. After the gastroscopy you will relax in the recovery room.

**Biopsy sampling**

During the gastroscopy we obtain biopsies from the duodenum, stomach and the esophagus (gullet). Biopsy sampling does not hurt, is not painful. We obtain biopsies to exclude premalignant Barrett’s esophagus and H. pylori gastritis (this is a special form of gastritis, inflammation of the stomach, which causes nausea, vomiting and abdominal pain). Abnormal findings are always biopsy sampled (ulcer, tumor). Polyps are removed with the biopsy forceps or a sling.

**Complications**

Complications during gastroscopy occur in 0.02% of the cases and include bleeding, perforation. Very rare side effects after gastroscopy may include nausea, vomiting and abdominal pain. Our anesthesiologist immediately antagonizes such complaints by the administration of effective drugs.

**Endoscopy report**

The endoscopy report lists location and size of endoscopically visible abnormalities (inflammation, areas suspicious for Barrett’s esophagus, hiatal hernia, tumor, polyp, ulcer, ring, web). In addition the report catalogs the biopsy sites and types of interventions (polypectomy). The report includes color images of the esophagus (gullet), the stomach and the duodenum. Finally the endoscopy report includes recommended therapy (medication, additional examinations etc.). The endoscopy report is an important health document and should be provided to your physicians during health consultation.

**Relevance of gastroscopy**

The gastroscopy contributes to tailor the treatment of your reflux (life style, medical, anti reflux surgery).

**Expert opinion**

**Sebastian Schoppmann (Surgeon, Vienna):**

Today gastroscopy should not be conducted without sedation. It avoids fear and stress for the patient. The physician finds adequate conditions to inspect the esophagus and obtain the biopsies. This is essential for adequate diagnosis and treatment.

**Fritz Wrba (Pathologist, Vienna):**

The pathologist examines what she or he gets. Fast track gastroscopy without sedation usually provides small amount of biopsies with low diagnostic value. I am happy to get the full set of biopsies. This enables me to make a good diagnosis. And this will in fact help the patient to get adequate treatment.

**Martin Riegler (Surgeon, Vienna):**

Many patients report a long story of many, many gastroscopies. And all these endoscopies lacked
adequate biopsy sampling and inspection of the esophagus. Therefore the adequate diagnosis could not be established. This means that these tests were basically useless. This is why we favor adequate biopsy sampling. This takes time. Sedation helps us to get it done in a relaxed atmosphere for the patient and the physician. At the end of the day we get optimal diagnosis for adequate treatment.

**Literature**