Gastroesophageal Reflux Disease (GERD)

Patient and family information, brought to you by the Education Committee of APSA

Overview - "What is it?"

Gastroesophageal reflux disease (also known as GERD) is a digestive condition where acid from the stomach contents flows back upward into the esophagus and, sometimes, back into the mouth leading to various symptoms.

GERD commonly occurs due to a malfunction of barriers that normally prevent stomach contents from flowing from the stomach back up the digestive tract.

Reflux of food (spitting up) is very common in infants. This largely resolves by 12 months of age.

Simple reflux is different that gastroesophageal reflux disease, which is notable for associated complications or symptoms. Long-standing reflux can lead to damage of the esophagus, difficult or painful swallowing or asthma-type symptoms.

Signs and Symptoms - "What symptoms will my child have?"

- Symptoms of GERD may vary with a child's age. Many of the symptoms may also be associated with other medical and developmental conditions. These symptoms should be discussed with a health care provider.
- Infants may fail to gain weight (also termed failure to thrive), refuse to eat, aspiration (where food or liquid come up and enter the airway instead of the esophagus), recurrent pneumonias (infections of the lungs), or esophagitis (inflammation of the esophagus).
- Preschool children may have decreased food intake, poor weight gain or respiratory problems.
- Older children and adolescents may complain of heartburn, spitting up food, hoarseness, nausea, pain in the upper abdomen, difficulty swallowing, wheezing, or breathing issues.

Diagnosis - "What tests are done to find out what my child has?"

Gastroesophageal reflux is often diagnosed based on the patient's symptoms. A doctor or health care provider can evaluate your child for this condition. Additional tests may be necessary.

Upper gastrointestinal studies: X-rays test where the child swallows contrast to evaluate the passage of food or liquid. It also shows the anatomy of the inside of the esophagus and stomach.

Endoscopy: A diagnostic test where a physician passes a lighted flexible camera through the mouth and into the stomach while the child is sedated.

pH Probe study: Where a catheter is inserted through the mouth, esophagus, and stomach. The catheter measures the acidity of the fluid in the esophagus and stomach. This is usually done over 24 hours.

Motility and manometry test: The movement and pressures within the esophagus is tested by catheters.

If your child has persistent symptoms or worsening problems, seek medical evaluation by a doctor who will evaluate the symptoms.

Treatment - "What will be done to make my child better?"

Treatment of GERD in children and adolescents is similar to that used for adults.

Medicines: All these medications are available over the counter, however, use in children is best discussed with a health care provider first.

- Proton Pump Inhibitors (PPIs) decrease the amount of acid produced by the stomach. By lessening acidity of the stomach, the irritation of the esophagus is reduced.
- Histamine type 2 receptor agonists (also known as H2 blockers) may be useful to decrease acidity of stomach fluid.
- Antacids may also be useful when symptoms are infrequent.

Severe cases of GERD that do not respond to medical therapy may require surgery.

Surgery: Surgery may be necessary in the presence of: Pulmonary complications, inadequate response to medical management, growth failure and ongoing pain or esophagitis (damage to or narrowing of esophagus from acid). The role of surgery is best determined in consultation with a pediatric surgeon.

The most common surgery for GERD is a fundoplication, which involves wrapping a portion of the stomach around the esophagus. There are variations in how much of the esophagus is covered by the stomach and whether the stomach wraps around the front or the back. This

procedure can be done laparoscopically (with several small incisions) or through a traditional larger incision. Outcomes are similar for both procedures. Depending on the child's specific needs, a feeding tube may be placed in the stomach at the same surgery.

Home Care - "What do I need to do once my child goes home?"

Diet:

For infants, some changes in diet can decrease the severity of symptoms:

- Trials of smaller volume, but more frequent meals
- Elimination of cow's milk from the diet
- Thickening of foods with infant oat or rice cereal
- Continuation of breast feeding in infants who are currently breast feeding

For children and adolescents, the following changes can improve GERD symptoms:

- Elimination of chocolate, peppermint, carbonated or acidic beverages or any foods that seem to worsen symptoms
- Weight loss in overweight children and maintenance of appropriate weight
- Remaining upright (sitting or standing) for a period of time after meals
- Chewing gum or using lozenges

What to call the doctor for: If your child had surgery for GERD, call for continued vomiting, persistent fevers, increasing pain or increasing redness around the wound(s).

Follow-up care: If your child had surgery for GERD, your surgeon will plan a post-operative clinic visit within generally 2 weeks. You should continue to follow-up with your child's pediatrician. For follow-up if your child is managing their GERD with medicines and diet changes, the follow-up may be at longer intervals (4-6 weeks) and/or by a pediatric gastroenterologist.

Long Term Outcomes - "Are there future conditions to worry about?"

Lifestyle modifications may provide relief for patients with mild symptoms. They are useful adjuncts to medications and surgery in patients who require these therapies but are unlikely to reverse existing damage to the esophagus on their own.

Medical management with PPIs is the usual first course of treatment. PPIs have a higher rate of medication compliance and may better aid in regression of existing damage to the esophagus as well as symptom improvement. The majority of patients respond to medical therapy along with lifestyle modifications.

Surgery may be a reasonable alternative to long-term medication use or for those who fail to respond to medical therapy, though ongoing medical therapy may be required. A discussion with your pediatrician and surgeon should include the indications, risks and benefits of operative therapy.

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Authors: J. Liebig, MD; Romeo C. Ignacio, Jr., MD
Editors: Patricia Lange, MD; Marjorie J. Arca, MD; Janice Taylor, MD