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Gastrointestinal Foreign Bodies and Bezoars (intestinal foreign bodies)

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

Overview – “What is it?”

Children place objects in their mouths and accidentally or intentionally swallow them. Objects may be stuck in any part of the digestive tract from the throat to the intestines, causing blockage. Some items may also cause injury to the intestine; for instance, disc or button batteries can damage the esophagus (the tube that connects the mouth and stomach), magnets may create holes in the intestine, and sharp objects can cause cuts in the intestine. A **bezoar** is a solid mass of material that the body can't digest. It usually gets stuck in the stomach. These materials include vegetable matter, fruits, vegetables, seeds, or hair. They can get so big that they take up most of the space inside the stomach.

If your child often gets food stuck in their esophagus, doctors should check for a special kind of allergic reaction called eosinophilic esophagitis.

Ingestion of objects usually happens in toddlers, as they explore their surroundings and place objects into their mouths. It can, however, happen at any age; for example: holding a paperclip in the teeth while working on homework or teenagers using magnets to pretend to have lip or tongue piercings.

Signs and Symptoms – “What symptoms will my child have?”

Early signs: Your child may have chest pain when an object is stuck in the esophagus. If the normal flow of saliva (spit) down the esophagus is obstructed, the child may drool. If there is indigestible material in the stomach, vomiting can be a symptom.

Later signs/symptoms: If the object in the stomach is big, it might be felt on abdominal exam, especially if the child is thin. The child may have belly pain and get full easily. Obstruction or blockage of the intestine can result in vomiting of bile (green or yellow in color).

It is important to know that swallowing two or more magnets is particularly dangerous because the magnets can connect across loops of bowel and hurt the tissue they are squeezing together. It is not uncommon for children to have minimal to no symptoms at first because the magnets are so small. The small size does not mean they are less dangerous. If you have any concern that a magnet was swallowed,

seek medical attention immediately. Below are examples of different types of high-strength magnets, also called neodymium or rare earth metal magnets.



Images generated using OpenAI. (2024). ChatGPT-4o.

Diagnosis – “What tests are done to find out what my child has?”

Labs and tests: Metal objects are visible on X-rays and can help us find their location. Depending on how your child is feeling or what is seen on X-ray, a computed tomography (CT) may be needed. This specialized X-ray may give a better answer regarding the type of object and the level of obstruction or any other problems that the object has caused.

Conditions that mimic this condition: Some infections of the throat (pharyngitis), neck, and intestines (gastroenteritis) may have similar symptoms to a foreign body ingestion. Reflux can also cause similar problems. Intestinal blockage caused by other reasons (inflammation, scarring) can have the same symptoms.

Treatment – “What will be done to make my child better?”

Medicine: Pain medication may be given if your child is uncomfortable. If the child requires surgery, medications to treat infection (antibiotics) may be necessary. Sometimes stool softeners or laxatives are given to try to move an object through the intestine.

Surgery: The type of procedure varies depending on the type of object, location of the object, and what problems the object has caused.

Small objects in the stomach may be removed by endoscopy. Endoscopy is when a flexible telescope is placed in the mouth and then gently pushed through the esophagus, stomach, and part of the small intestine. The doctor can look at for evidence of damage or injury directly. If there is an object stuck in the stomach, it is removed during this procedure. Most coins will pass through the intestinal tract once they are in the stomach and usually do not require endoscopic retrieval. However, open safety pins, objects with sharp edges, magnets, batteries, and items that fail to go through the stomach will need to be removed.

Sometimes multiple X-rays will be done to make sure the ingested object is moving through the intestine and not stuck somewhere. The child's stool may be checked to see if objects that aren't retrieved with endoscopy or surgery make their way out of the body.

Your child may require an operation if:

1. Endoscopy fails to remove the object from the stomach
2. The object moved into the intestine and is stuck
3. The object has caused other complications.

The operation can be done open or laparoscopically.

Open: The operation is done through a large incision on the belly, usually up-and-down (vertical).

Laparoscopy: In laparoscopic surgery, several small cuts (incisions) are made. Through one of the cuts, a video camera is placed. The surgery itself is done using small instruments placed through the other incisions.

Your surgeon will discuss the surgical approach based on the diagnosis.

Preoperative preparation: Your child will not be allowed to eat prior to surgery. If the child requires surgery, medications to treat infection (antibiotics) may be given.

Postoperative care: What happens after surgery depends on what injuries your surgeon finds during the procedure. If the object is removed and there is little or no injury to the intestines, you may be able to go home soon after surgery. If a bigger surgery is needed to fix problems like a hole in the intestine, you may need to stay in the hospital until everything heals well.

Risks/Benefits

Risks: Endoscopy may injure the esophagus. The child may breathe saliva or stomach juices into the lungs, which can cause infection (pneumonia). Risks of surgery include bleeding, infection, and injury to organs.

Benefits: Removal of a foreign body often gives immediate relief of symptoms. Endoscopy can show if the object injured the intestine, how badly, and if any future checks will be needed to make sure

everything heals well. If surgery is required, removal of the object and dealing with complications will be accomplished.

Home Care – “What do I need to do once my child goes home?”

Diet: Your child should be able to resume a general diet.

Activity: If endoscopy was performed, the child should be able to resume normal activity right away. If the patient had the procedure with small incisions (laparoscopic), they can return to normal activity in 2 weeks. If the surgery is done through a big incision, then they can return to normal activities in about 6 weeks. If they needed surgery where a cut was made (laparoscopic or open) they should not carry more than 10 pounds of weight or do hard physical activity until their surgeon says it is ok.

Wound care: The patient can shower in 2 days but should wait 7 days after surgery before soaking in a tub or pool.

Medicines: Medication for pain such as acetaminophen (Tylenol®) or ibuprofen (Motrin® or Advil®) or something stronger like a narcotic may be needed to relieve pain for a few days after surgery. Stool softeners and laxatives can help with regular stooling after surgery, especially if your child is taking strong pain medications (narcotics like Percocet or oxycodone).

What to call the doctor for: After going home, symptoms that suggest infection such as fevers, wound redness, and discharge should be addressed. If there is a lot vomiting, pain that does not get better with medications, or problems stooling, contact the surgeon.

Follow-up care: If your child did not need surgery to resolve the problem, it is unlikely that your child will need to be seen by the surgeon again. If a cut was made, your surgeon may want to see your child 2 weeks after surgery to check the wound.

Long Term Outcomes – “Are there future conditions to worry about?”

Generally, the outcomes are excellent, as most objects are removed without incisions. If incisions are needed, the wounds usually heal very well with no long-term issues. The main issue to watch for is scar tissue that might form on the bowel, which may lead to the bowels being unable to pass materials forward (obstruction). Your child will most commonly present with vomiting green (bilious) material. If this happens, your child will need to be seen. If your child ingested materials such as hair, psychosocial issues will need to be addressed to prevent this from happening again. This will most likely have been arranged before your child left the hospital.