

ENDOSCOPY IN CHILDREN



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The application of gastrointestinal endoscopy in children has transformed the field of Pediatric Gastroenterology over the last several decades. From neonatal to adolescent patients, endoscopy has become one of the most fundamental elements of practice, and its indication is increasing each year. Not only is endoscopy minimally invasive, it also establishes a safe, rapid diagnosis with minimal risks to the patient.

The new model of healthcare reform places emphasis on the outcome, quality of care, and cost of patient care. In following of these new health care reform goals, endoscopy in children will prevent costly and otherwise unnecessary treatments by establishing a precise, rapid, diagnostic and therapeutic tool that will decrease hospital utilization, emergency room visits, and invasive surgeries.

An esophagogastroduodenoscopy (EGD) is the most frequent procedure performed in children. Major indications for EGD's include: dysphagia, odynophagia, unexplained vomiting, abdominal, or chest pain. Endoscopic evaluation is required to differentiate diagnoses of Eosinophilic Esophagitis (EoE), esophagitis, Barrett's Esophagus, H. pylori gastritis, allergic gastritis, ulcer disease, achalasia, tracheoesophageal fistulae, esophageal strictures, versus extraintestinal causes. A 24 hour pH probe can be placed under endoscopic

guidance to evaluate for GERD. Tissue biopsy from the duodenum can evaluate for carbohydrate malabsorption, celiac disease, autoimmune enteropathy, allergic enteropathy, infection, or Crohn's Disease. An EGD can also determine the precise diagnosis, location and severity of hemorrhage, the risk of re-bleeding, and the complications of intervention. Foreign body ingestion (batteries, coins, small objects, toys, chemicals) causes severe mucosal injury which can be identified and possibly therapeutically removed from the patient. Placement of PEG and GJ tubes have been one of the most frequent endoscopic interventions performed. These are usually placed in patients with underlying disorders, including gastroparesis, neurodevelopmental disorders, cerebral palsy, intellectual delay. EGD surveillance is indicated for certain patients with family histories of polyposis syndromes, cancers, and Barrett's esophagus. ERCP (Endoscopic Retrograde Cholangiopancreatogram) is increasingly used to assess the biliary tree and remove any gallbladder sludge/stones or blockages. Endoscopic Ultrasound (EUS), although emerging, cannot only evaluate organs more precisely, but can also be used to assess the layers of intestinal walls, blood flow through blood vessels, and obtain a fine needle aspirate of any suspicious masses.

Skill and experience have advanced to the point that both diagnostic and therapeutic colonoscopy are now routinely performed by pediatric gastroenterologists. The indications for colonoscopy in children include: lower GI hemorrhage to search for common causes of bleeding in children include anal fissures, colitis, benign juvenile polyps, IBD, and colitis; chronic diarrhea; medication abuse (commonly laxatives), which presents as melanosia coli; cancer surveillance of polyposis syndromes and

ulcerative colitis; polyposis syndromes for possible polypectomy; reduction of volvulus to decompress the colon; dilation of colonic strictures with balloon catheter dilation; and removal of foreign bodies. A total colonoscopy is also indicated to differentiate Crohn's Disease from Ulcerative Colitis.

The power of colonoscopy rests with the simultaneous ability to visually inspect the entire length of the colon and distal ileum, take biopsies for histological analysis, and intervene therapeutically by applying hemostasis, removing polyps or foreign bodies, dilating strictures, or decompressing obstructed bowel.

Complications are infrequent with endoscopies, but include: infection, hemorrhage, perforation, duodenal hematoma, cardiac or respiratory decompensation, serosal lacerations from endoscope trauma, or death.

There are few absolute contraindications for an endoscopy in a child. They include, but are not limited to: fever (infection), cardiovascular instability, respiratory instability, neurologic instability, suspected bowel perforation, suspected ischemic colitis, inadequate procedure preparation, or coagulopathy.

A comprehensive team approach to patient care is offered by our skilled physicians and professionals in our practice. Our practice has access to a state of the art endoscopy suite. In addition to upper and lower endoscopy, we also use capsule endoscopy, which evaluates the entire gastrointestinal tract, including the small bowel which cannot be visualized via the EGD or colonoscopy.

Please visit our website www.giforkids.com. It has extensive resources available including, Celi-Act, Bee Fit 4 Kids, Transitions: Behavior Health Center for Kids, KidsFACT, plus more in depth information regarding tests, procedures, nutrition, and diseases so our patients can better manage their health.

PREPARING FOR A PROCEDURE

So your patient is going to have an endoscopy and/or colonoscopy... How do you prepare a child for that? To start, it is helpful to let them know why they are having the procedure done. Most often, these procedures are done to collect more information and run tests to determine the cause of a child's illness/discomfort. Letting the child know that we will get answers from these tests is important. The scope allows the doctor to take pictures of their digestive system and also collect tissue samples to be analyzed in a lab. With these answers the doctor can create a treatment plan to address the problem so they will feel better.

The next question to answer is "how?" Simplifying the truth about what happens during a scope is important for the child to know. The clean out procedure can be lengthy and unpleasant. Keeping a sense of humor and allowing potty humor during this process can help things "move along" - so to speak. Some children become anxious about the preparation for a colonoscopy, so normalizing the process can help. "They are just getting all the poop out so the doctor



Regina Hummel, PhD

can get good pictures." Special distractions like movies or video games can create a distraction from the process as well.

Once at the hospital, our staff provides wonderful care and explanations to children so they know what to expect. Letting them know that they will be asleep and not feel anything is helpful to calm fears. It is also helpful for them to

have an idea of how small the camera on the scope is. I had one youngster who thought the pictures would be taken with a camera like the one his father uses. That caused much concern until he realized a camera can be very small. Often the doctor will allow the child to see the pictures from their scopes if they ask.

Some simple and brief explanations before these procedures can help a child get through these important tests. If you have concerns about how your patients are managing their anxiety prior to medical testing feel free to call our offices. We are happy to help!

TIPS AT A GLANCE

- ☐ Let your child know why they are having the procedure.
- ☐ Simplify the truth about what will happen during the procedure.
- ☐ Explain the size of the scope camera.
- ☐ Try to keep a sense of humor.

Children are fascinating and impressive with their unique "take on the world." Often they are charming and engaging and seem to not have a care in the world. For some children though, managing day-to-day stressors and even more complicated life events like the onset of illness, environmental changes, or having to have a special test or procedure can throw them into a tailspin. Often an endoscopy or colonoscopy is necessary to diagnose a gastrointestinal disorder. When children have difficulty coping with stress or managing their behavior, a therapist can be very helpful in sorting out these troubles.

Our behavior health clinicians can help your pediatric patients with:

- **GI-related disorders** including recurrent abdominal pain, food allergies, celiac disease, irritable bowel syndrome & inflammatory bowel disease, constipation & encopresis
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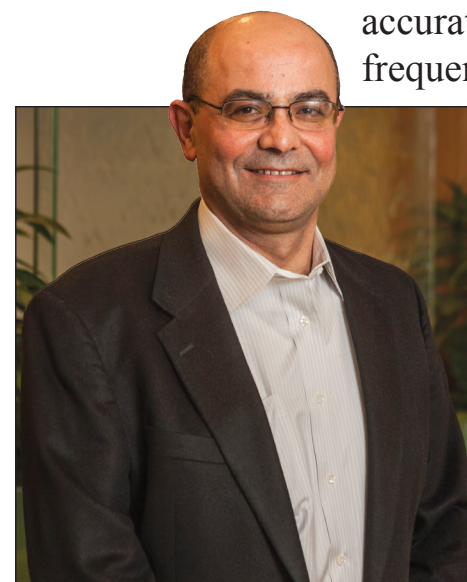
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We are always looking for ways to improve the health of children and provide state of the art care. As we become involved in the healthcare initiatives emphasizing affordable healthcare, it is important to know endoscopy in children provides an essential role in determining an

accurate diagnosis and initiating appropriate treatment to decrease frequent emergency department visits and hospital admissions. In this

edition of the GI for KIDS newsletter we will discuss the indications and risks of general endoscopy in children.

As we watch the daily progress of the new East Tennessee Children's Hospital Surgery Center being built, we are amazed at how much work is already underway. We are excited to continue providing care for children here on our campus.



Al-Tawil

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Medical Director

SAVE THE DATE

KidsFACT 2nd Annual Casino Night

August 29, 2015 at 6:30 pm ♣ Knoxville Marriott

Please join us for dinner, drinks, dancing and casino entertainment to help benefit KidsFACT.



Our Casino Night Fundraiser is invitation only. If you are interested in receiving an invitation and attending the event, please contact us at kidsfactcasino@gmail.com. Please also contact us if you are interested in making a donation or sponsoring the event.