

Innovations in Gastroenterology & GI Surgery



*Rady Children's - A comprehensive system
focused solely on children.*



PEOPLE

Motility disorders expert joins team



Hayat Mousa, M.D., AGAF, has joined the Division of Gastroenterology, Hepatology & Nutrition at Rady Children's Hospital-San Diego as medical director of the motility center and clinical medical director of pediatric gastroenterology. She is recognized as a world-renowned expert in pediatric motility disorders.

Dr. Mousa comes to Rady Children's from Nationwide Children's Hospital in Columbus, Ohio, where she developed a motility center and served as its medical director for 15 years. Along with motility and functional disorders, her clinical interests include swallowing disorders, gastroparesis, gastric electric stimulation, constipation, cecostomy, sacral nerve stimulation, rumination, gastroesophageal reflux, and Hirschsprung's disease.

Dr. Mousa's research, which is widely published, focuses on chronic intestinal pseudo-obstruction, pre- and post-small bowel transplantation, gastric accommodation and compliance after fundoplication in comparison to its baseline before the surgery, gastroesophageal reflux and its association with apnea & respiratory symptoms, and gastric pacing with its effect on gastric function and quality of life. She has received several National Institutes of Health grants and industry funds.

Dr. Mousa is an active member of various professional societies, including the American Neurogastrointestinal Motility Society, the Society for Pediatric Research, NASPGHAN North American Society for Pediatric Gastroenterology, Hepatology and Nutrition, the American Gastroenterology Association, and the Association of Gastrointestinal Motility Disorders.



PROGRAMS

Multidisciplinary approach is hallmark of motility center

Rady Children's motility center diagnoses and treats children with a wide range of disorders of the nerves and muscles of the esophagus, stomach and intestines.

Commonly referred disorders include chronic intestinal pseudo-obstruction, Hirschsprung's disease, gastroparesis, severe chronic constipation, gastroesophageal reflux, and food aversion. Due to the physical and emotional effects associated with these conditions, the center uses a multidisciplinary treatment approach.



Along with seeing a pediatric gastroenterologist during their treatment, patients and their families may work with dietitians, physical therapists, psychologists and surgeons. Patients may also have clinical hypnosis and guided imagery, which have been proven to help many children and adults with chronic abdominal discomfort.



innovation
belongs in every moment

These therapies are performed at the center by Rebecca Cherry, M.D., (pictured) a pediatric gastroenterologist who received special training in medical hypnosis. Hypnosis or guided imagery sessions typically last about 30-45 minutes and are provided every two to three weeks. Up to eight sessions may be required. Between sessions, patients are asked to practice these techniques, often with the help of a customized audio recording.



RESEARCH

Discovery identifies potential biomarkers for nonalcoholic fatty liver disease

Nonalcoholic fatty liver disease (NAFLD), characterized by fatty infiltration in the liver, is the most common chronic liver disease in both children and adults in the United States.

Currently, there are no reliable methods to determine disease severity or to monitor disease progression and efficacy of therapy other than an invasive liver biopsy. Research by the lab of Ariel Feldstein, M.D., suggests the potential for using liver- and disease-specific blood biomarkers to non-invasively diagnose and monitor NAFLD.

Excess amounts of saturated fatty acids are a potential dietary trigger for NAFLD. In a study by the Feldstein lab, a high-fat diet was used as a physiologically relevant mouse model of NAFLD. Circulating extracellular vesicles (EVs) were then isolated and compared to control groups.



The investigators discovered that NAFLD mice had a significantly higher level of circulating EVs in their livers and blood. Moreover, these levels increased early in disease development and reflected changes in liver histopathology; EV levels correlated with hepatocyte cell death, fibrosis and pathological angiogenesis.

These findings suggest a potential for using specific circulating EVs as sensitive and specific biomarkers for the noninvasive diagnosis and monitoring of NAFLD.



INNOVATIONS

Division joins pioneering IBD medical center network

The Division of Gastroenterology, Hepatology & Nutrition has joined ImproveCareNow, an international network of medical centers caring for children and adolescents with inflammatory bowel disease.

The centers collaborate on quality improvement projects, with the goals of increasing the number of patients in steroid-free remission and creating or identifying best practices for evaluating and treating children with IBD. Data analysis from thousands of doctor/patient visits and a review of the latest studies and treatments worldwide are used to improve care. And everyone involved in the care process - providers, researchers, patients and families - works together.



This approach has led to improved patient outcomes, which have been recognized by the American Board of Pediatrics. The network has also received grants in recent years totaling more than \$15 million for cutting-edge research.

The Division plans to enroll patients in the network's clinical studies through its new multidisciplinary IBD program, scheduled to launch later this year. Along with GI physicians, the program's team will include providers from nutrition support, social work and pharmacy.



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