

Researchers offer lower-cost procedure for children with digestive tract problems

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Physicians at the University of Colorado School of Medicine on the Anschutz Medical Campus have published research that suggests a safe and lower-cost way to diagnose and treat problems in the upper gastrointestinal tract of children.

The researchers assessed the effectiveness of unsedated transnasal endoscopy (TNE) in evaluating pediatric [patients](#) with potentially chronic problems in their esophagus, which is the tube that connects the patient's mouth to the stomach. The research team included Joel A. Friedlander, DO, MA-Bioethics, Jeremy Prager, MD, Emily Deboer, MD, and Robin Deterding MD, of the Aerodigestive Program, working with the Gastrointestinal Eosinophilic Disorders Program at Children's Hospital Colorado.

In cases of eosinophilic esophagitis (EoE), patients develop a buildup of a type of [white blood cells](#) that can inflame or injure the tissue in the esophagus. The buildup of white blood cells can be caused by a reaction to foods, allergens or acid reflux and it can lead to difficulty swallowing and other problems.

Typically, children are evaluated with a procedure that requires sedation known as EGD (esophagogastroduodenoscopy), where a long flexible lighted tube is guided through a sedated patient's mouth and throat to examine inside of organs and detect abnormalities. Friedlander and his colleagues evaluated whether the use of a much thinner scope inserted through the nose rather than the mouth without the risks and costs of

anesthesia could be as effective in evaluating a patient.

Between March 2014 and January 2015, 21 patients aged 8 to 17 were enrolled in the study. The research team reviewed the quality of biopsy specimens and the satisfaction and comfort of patients with the procedure.

The result was that TNE "is safe, is preferred by patients and parents alike, and has the potential to dramatically reduce costs," with esophagus biopsies that are as good as those from EGD procedures, the authors wrote in an article published in the journal *Gastrointestinal Endoscopy*. The cost and the procedure's length of time are significantly reduced because the patient does not need to be sedated to perform TNE. Topical anesthetics were used and patients were equipped with video goggles to watch movies or television programs to distract them during the process.

According to the study, the patients and their parents expressed a high level of satisfaction with the procedure because of "the lack of anesthesia, the presence of parents during the procedure, the limited duration of the procedure, rapid recovery, and improvement in their quality of life."

Based on their analysis, the researchers found that the procedure has the promise of significantly reducing costs. The usual charge for EGD, which includes anesthesia, is \$9,391, while TNE would be \$3,548. For 100 procedures, the savings to the health care system would be \$584,300.

"Our study provides strong support for larger studies to validate this approach," said Friedlander. "This technique has the potential to significantly improve the lives of children with EoE in a safer, cost-effective, and efficacious manner."

Provided by University of Colorado Denver

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