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Sedation-Free Transnasal Esophagogastroscope for Dysphagia in an Inpatient Setting

PATIENT HISTORY

A 15-year-old inpatient with relapsed osteosarcoma on chemotherapy presented to the hospital with pleural metastasis, pleural effusion, atelectasis, and acute respiratory failure. He then developed dysphagia to solids and odynophagia. Possible etiologies for symptoms included infectious esophagitis (viral, fungal, etc), erosive esophagitis, pill esophagitis, and foreign body. As the patient was very-high risk for anesthesia (ASA IV) and required diagnostic upper endoscopy, careful consideration of investigation was needed. Sedation-free transnasal endoscopy (TNE) as esophagoscopy, esophagogastroscope, or esophagogastroduodenoscopy using the EvoEndo[®] Model LE Gastroscope had been introduced at the medical center for diagnosis of upper gastrointestinal tract disease and was considered as a safer diagnostic option for the patient. TNE by the medical team was selected as the appropriate and preferred option medically. It along with the procedure's risks, benefits, and alternatives was discussed with the patient and family. TNE was then performed per the medical team's and family's choice.

METHODS

Using the EvoEndo[®] Endoscopy System, a sedation-free TNE was performed during the patient's inpatient stay. Prior to the procedure, topical analgesia was applied to the patient's nose using a nasal atomizer as a mix of 4% topical lidocaine (1.5 ml/60 mg) and 2% lidocaine gel (1.5 ml/30mg) for a total lidocaine dose of 3ml/90 mg. Virtual reality goggles were also used by the patient for distraction and disassociation during the procedure. The EvoEndo[®] Model LE Single-Use Gastroscope, with an outer diameter of 3.5 mm, was then introduced into the patient's nose, beneath the inferior turbinate along the septum. Avoiding contact with the adenoid the scope was steered into the nasopharynx. The patient's epiglottis and upper esophageal sphincter (UES) was then visualized. The patient was asked to swallow, and the esophagus was intubated. The endoscope was advanced past the lower esophageal sphincter (LES) and into the stomach. Visual findings were recorded. Histologic specimens and brushings were obtained.

FINDINGS

A large superficial erosion in the distal esophagus just proximal to LES suggestive of pill esophagitis was found. No lesions suggestive of infectious esophagitis were noted. Biopsy results showed focal neutrophilic infiltrate with erosion and were negative for intraepithelial eosinophilia. Findings were consistent with pill esophagitis. He was managed conservatively with proton pump inhibitor (PPI) and sucralfate. He was also instructed to swallow pills with water.

SUMMARY

Sedation-free endoscopy using the sterile, EvoEndo[®] Model LE Single-Use Gastroscope was shown to expedite the work-up and evaluation of odynophagia and dysphagia in a 15-year-old immunosuppressed patient with osteosarcoma and lung disease who was considered high-risk for general anesthesia.

The EvoEndo[®] Model LE Gastroscope is intended for the visualization of the upper digestive tract in adults and pediatric patients, specifically for the observation, diagnosis, and endoscopic treatment of the esophagus, stomach, and duodenal bulb. The gastroscope is a sterile single-use device and can be inserted orally or transnasally. The EvoEndo[®] Controller is intended for use with an EvoEndo[®] Endoscope for endoscopic diagnosis, treatment, and video observation.