Esophageal duplication as a rare cause of pneumoperitoneum
Vanessa Hoy, MD and John Stork, MD
Department of Pediatric Anesthesiology, Rainbow Babies and Children's Hospital, Cleveland, OH

Introduction
Esophageal duplication is a rare abnormality of the alimentary canal.

Duplications can occur anywhere from the mouth to the anus.

Incidence is 1/4500 births

The most common site for duplication is the small intestine and the second most common site is the esophagus. 80% of them are noncommunicative with the main lumen of the esophagus.

Malformations may be associated with esophageal atresia, congenital heart disease, tracheoesophageal fistulas, vertebral anomalies, and other bowel pathology.

Presenting symptoms are asymptomatic to gastroesophageal reflux to respiratory compromise.

We report on a esophageal duplication as a rare cause of pneumoperitoneum found on incident during an ex-lap procedure.

Case Presentation
A 4 day old male born at 39 weeks with CHARGE syndrome (coloboma of the eye, heart defects, atresia of the choanae, growth abnormalities, urinary abnormalities, and ear abnormalities), cleft lip, and D-transposition of the great arteries.

At day 4 of life, the patient underwent Blalock-Taussig shunt (BT shunt) and ductus arteriosus ligation. During the case, anesthesia placed a TEE (transesophageal echocardiogram) probe, initially with great resistance, however redirection of the TEE probe was successful.

Postoperative events were uneventful and the patient was extubated. However CXR showed pneumoperitoneum. He also had increasing leukocytosis and concern for an inflammatory vs infectious process.

The patient was taken back to the OR where no gastric perforation was noted, however upon NGT placement, the NGT was seen in the abdominal area. Endoscopy was performed confirming esophageal duplication with perforation.

Peritoneal and pleural drains placed, and a nasogastric tube was placed for feeding.

Discussion
The incidence of pediatric TEE complications is low.

Complications include: airway obstruction, extubation, vascular compression, and perforation of the esophagus.

An even more rare cause is a TEE probe causing an esophageal duplication perforation.