

# ENDOSCOPIC AND SINGLE PORT TRANSGASTRIC REMOVAL OF ERODED GASTRIC BANDS

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## Introduction

Traditionally, laparoscopic gastric band erosion required a laparotomy or laparoscopy for band removal. Endoscopic removal has been reported using a specialty band cutting device that is not available in the United States. We therefore present our experience at the Cleveland Clinic with band removal using currently available non-specialty equipment, as well as a single port transgastric technique that can be performed as an alternative to surgery when endoscopic removal fails.

## Methods

Retrospective review of all eroded gastric bands removed endoscopically or with a single transgastric port between 2007-2019 at the Cleveland Clinic

Endoscopic techniques employed to cut bands: Scissors, needle knife, teflon coated hydrophilic wire sawing technique

If unsuccessful, a single transgastric port was placed and an ultrasonic energy device was used to transect the band

### Endoscopic Teflon-Coated Wire Technique:

- The patient is intubated and an OverTube is placed
- A teflon coated hydrophilic wire is endoscopically passed between the gastric band and stomach wall
- The wire is then grasped and pulled back out through the mouth with the endoscope, pinning the wire and band against the OverTube
- Both ends of the wire are held outside of the patient and a back and forth sawing motion is performed to cut through the band
- The band is then grasped and removed endoscopically out through the mouth

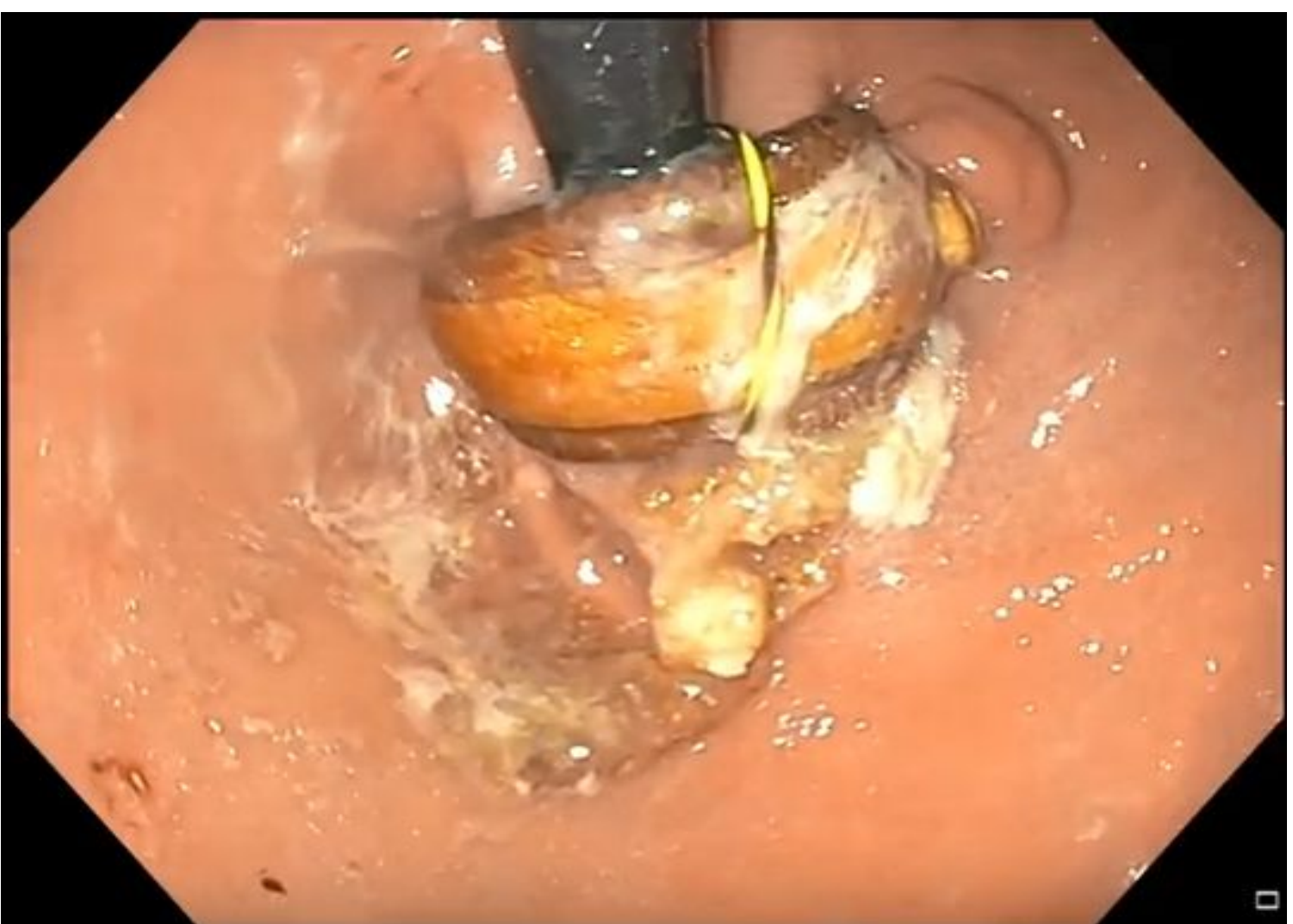
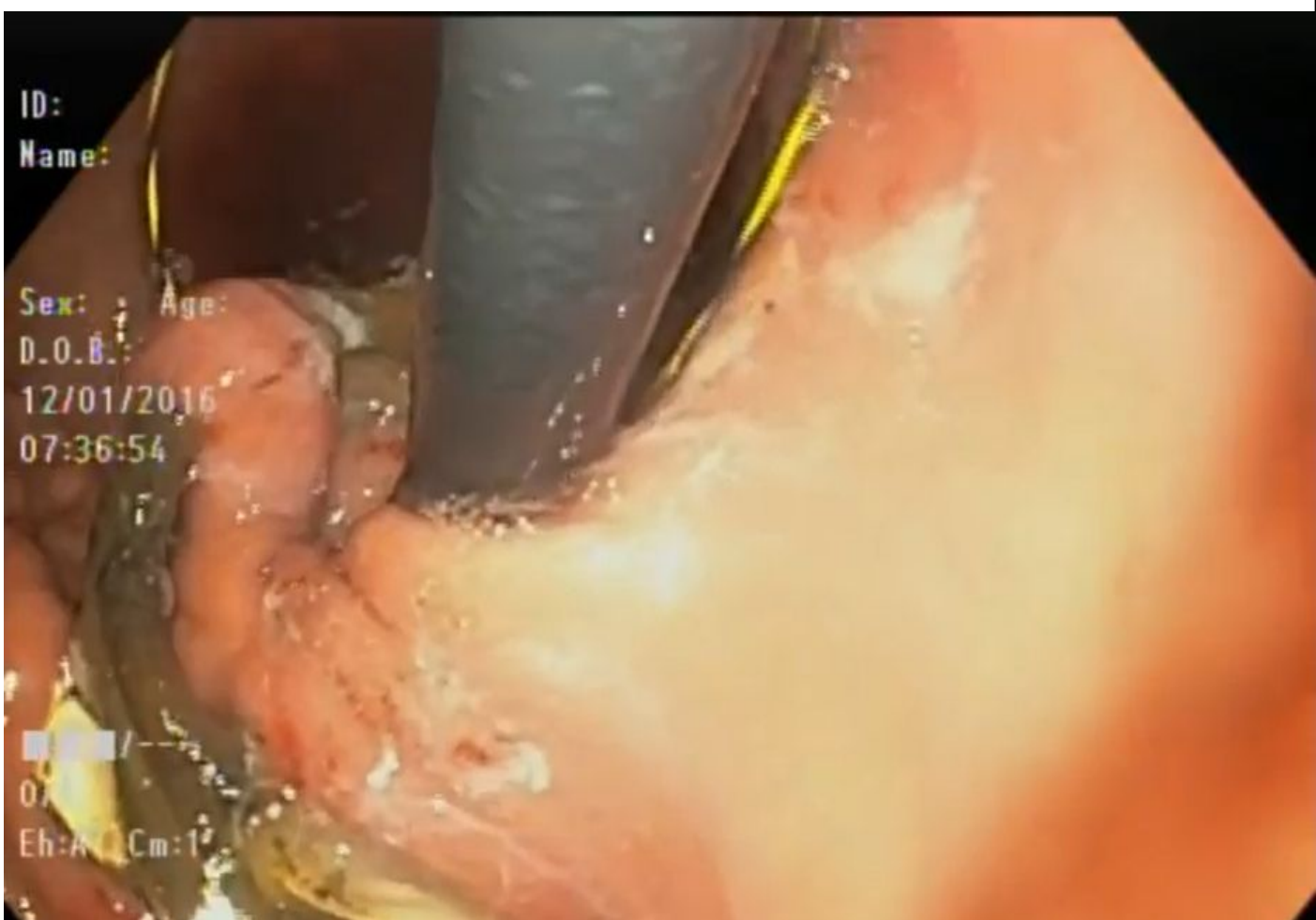
### Single Port Transgastric Technique:

- The stomach is insufflated with the endoscope
- Under endoscopic vision, a trocar is placed through the abdominal wall into the stomach, similar to safe-track PEG technique, creating a working port
- The band is cut with a Harmonic device
- The band is removed endoscopically out through the mouth
- The transgastric trocar is replaced with a gastrostomy tube



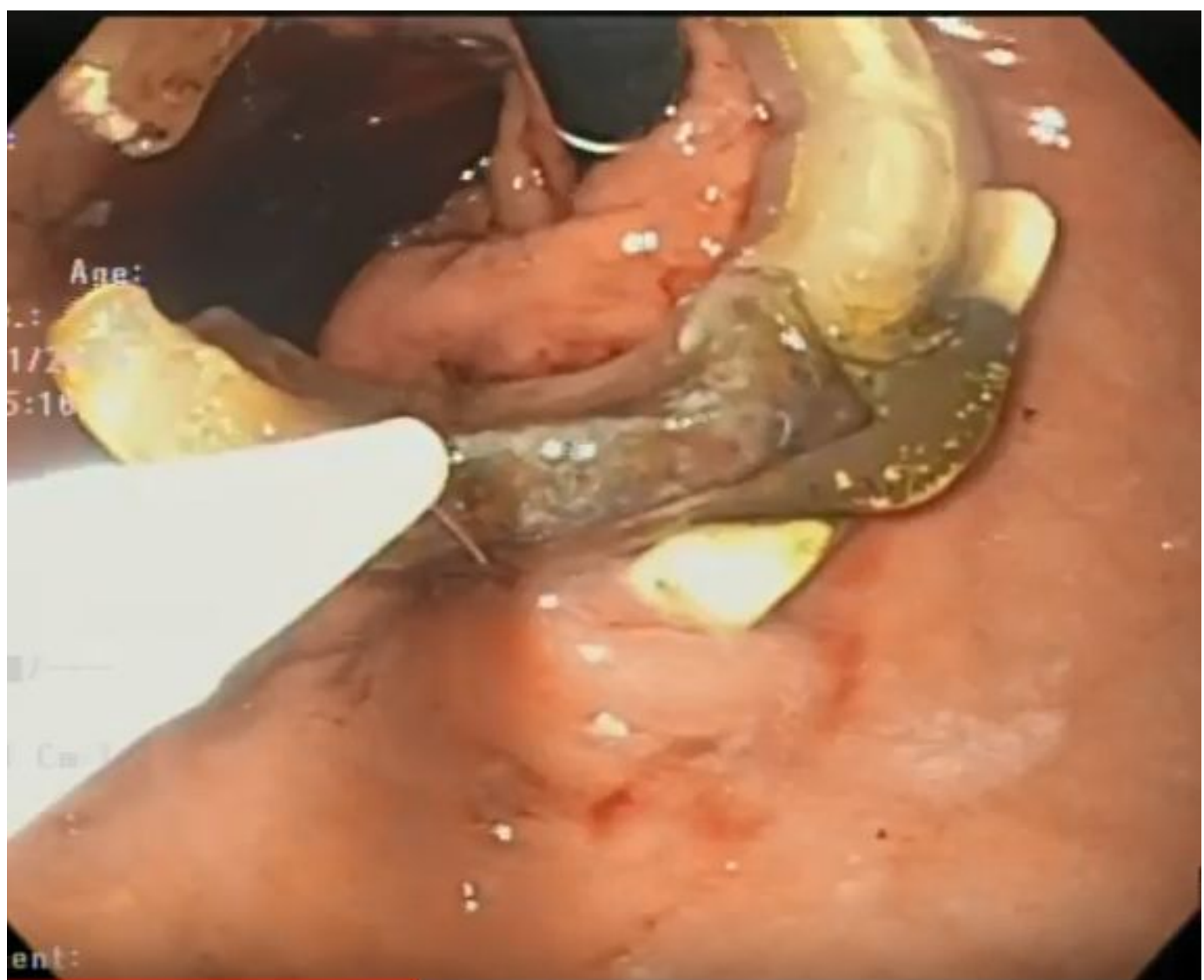
Wire passed between the stomach and gastric band

Both ends of the wire around the gastric band



The teflon wire is around the gastric band and pinned against the OverTube

Band being removed with snare and endoscope



## Results

| Table 1.                          | Patients (10) |
|-----------------------------------|---------------|
| Age at removal                    | 50 ± 10.8     |
| Sex (F/M)                         | 8/2           |
| BMI                               | 41 ± 15.8     |
| Approach                          |               |
| Endoscopic                        | 10            |
| Jagwire                           | 4             |
| Rat Tooth Forcep                  | 1             |
| Endoscopic Scissors               | 2             |
| Transgastric Salvage              | 3             |
| Type of Gastric Band              |               |
| Adjustable                        | 6             |
| Non-Adjustable                    | 4             |
| Average Length of Operation (min) | 66            |
| Range (min)                       | 15-120        |

No patients required endoscopic stent or clip placement after removal

70% were discharged the same day or after an overnight observation

## Conclusion

Eroded gastric bands can safely be removed endoscopically using varied techniques. Addition of a single transgastric port is a helpful adjunct when endoscopic therapy alone is unsuccessful.