



Bolus obstructie Corpora aliena Caustisch letsel

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Isala Zwolle

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No disclosures

Casus

Een 55-jarige man meldt zich om 23.30 uur op de HAP, nadat hij enkele uren tevoren acuut pijn achter zijn borstbeen kreeg tijdens het eten van een karbonade. Hij heeft geen pijn meer, maar drinken lukt niet meer en ook zijn speeksel kan hij niet kwijt. De dienstdoende huisarts belt je op. Hij denkt dat er een stukje vlees vastzit in de slokdarm en vraagt wat hij het beste kan doen.

Wat is jouw antwoord?

Groen:

Stuur patiënt maar door naar het ziekenhuis voor een spoedgastroscoopie.

Rood:

Patiënt mag morgenochtend naar het ziekenhuis komen voor een gastroscoopie.

Hoe ga je de vleesbrok verwijderen?

Groen:

Doorduwen naar de maag.

Rood:

Met lis naar buiten trekken.



Acute Esophageal Food Impaction

Estimated incidence of 13 episodes per 100.000¹

One of the most common endoscopic emergencies

Male : female 1,7 : 1

¹ Longstreth et al, GIE 2001

Clinical presentation of food impaction

Acute onset of dysphagia or chest pain

Complete inability to swallow food and saliva

Clinical presentation of food impaction

Acute onset of dysphagia or chest pain

Complete inability to swallow food and saliva

“Steakhouse syndrome”

“Backyard barbecue syndrome”

Types of food in 223 episodes

Beef	78	(35%)
Meat (unspecified)	44	(20%)
Chicken	36	(16%)
Unspecified	17	(8%)
Pork	15	(7%)
Turkey	11	(5%)
Vegetable	6	(3%)
Miscellaneous	6	(3%)
Fruit	5	(2%)
Fish	4	(2%)
Lamb	1	(<1%)

Longstreth et al, GIE 2001

Etiology of food impaction (n=194)

Schatzki's ring	43%
Peptic stricture	35%
Hiatal hernia	4%
Miscellaneous	7%
No abnormality	12%

Longstreth et al, GIE 2001

Etiology of food impaction in Zwolle (n=51)

	Number (%)
• GERD/peptic stenosis	31 (61)
• Motility disorder	5 (10)
• Candida esophagitis	5 (10)
• Radiation-induced stenosis	3 (6)
• Eosinophilic esophagitis	2 (4)
• Denture-related problems	1 (2)
• Other	1 (2)
• No diagnosis	3 (6)
• Esophageal malignancy	0 (0)

Van der Sluis, NVGE 2011

Timing of endoscopy

Emergent endoscopy (<2-6 hours):

Patients with total obstruction

Urgent endoscopy (< 24 hours):

Patients with subtotal obstruction

ESGE Guideline, Endoscopy 2016

ASGE Guideline, GIE 2011

Choice of endoscope: flexible!

Flexible endoscope

success: 94-100%

risk of perforation: 0,018 – 0,05%

Rigid endoscope

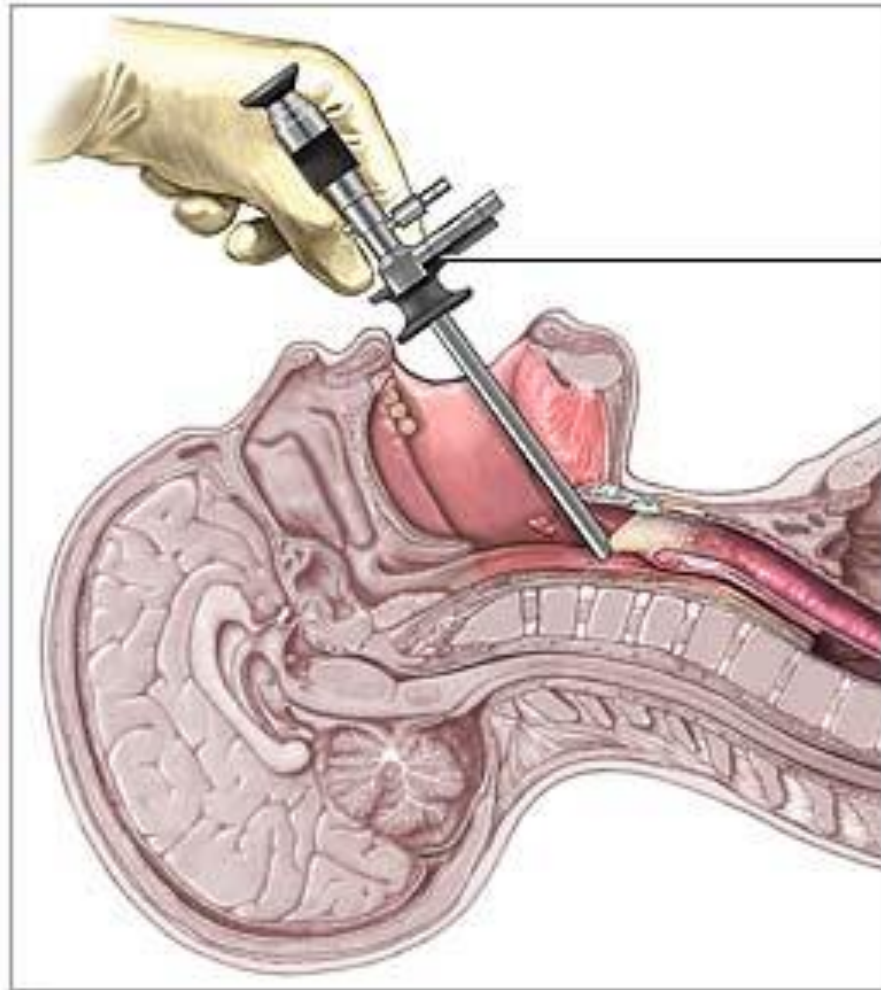
success: 94-100%

risk of perforation: 0,2 – 4,5%

use for proximal impaction only!

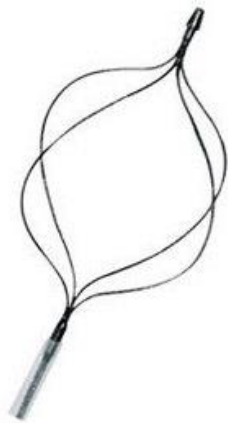
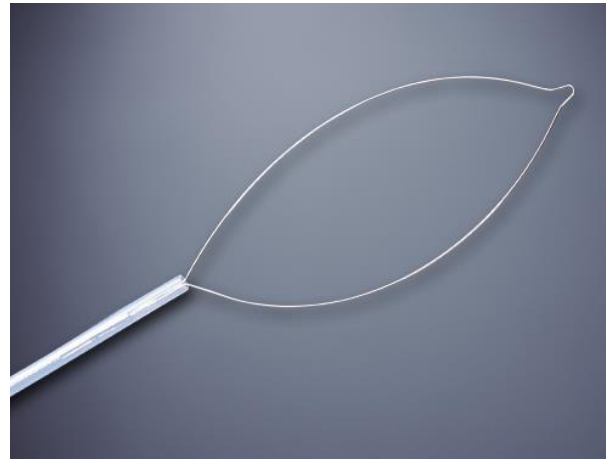
ASGE Guidelines, GIE 2011

Talstra et al, NTvG 2009



Laryngoscope

Endoscopic tools



Endoscopic techniques

- N > 375
- Push-technique
- En bloc extraction
- Piecemeal extraction and push-technique
- No perforations!

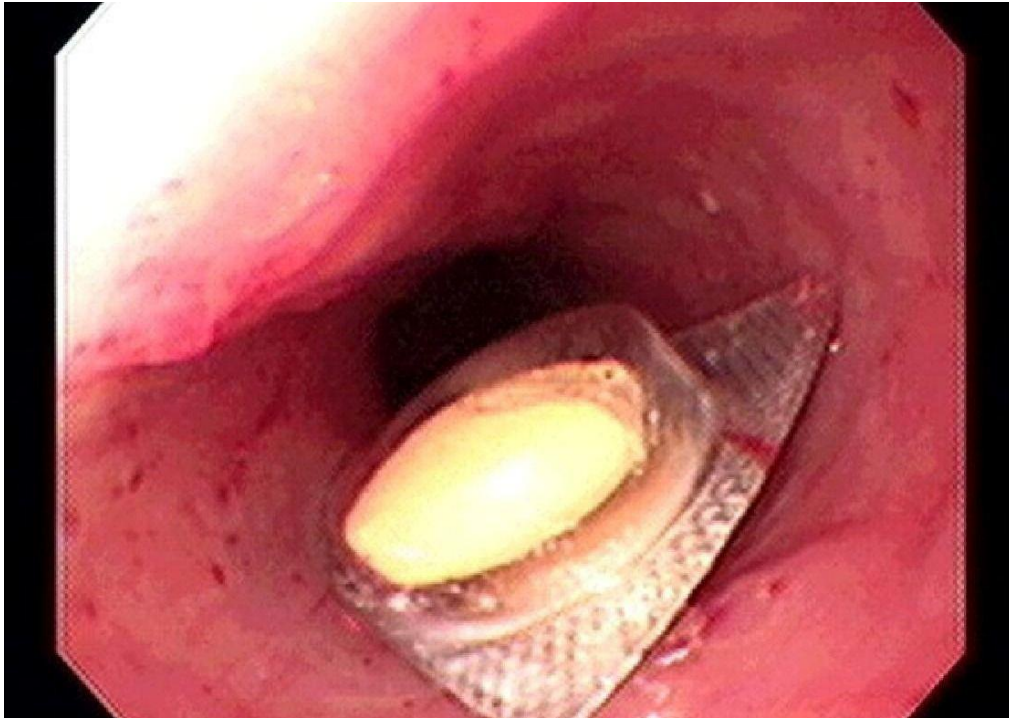
ASGE Guideline, GIE 2011

ESGE Guideline, Endoscopy 2016

Longstreth et al, GIE 2001

Vicari et al, GIE 2002

Kirchner et al, Surg Endosc 2011



Foreign body ingestion

Children > adults

Accidental ingestion:

- Coin, button, battery, toy, needle, toothpick, fish/chicken bone, partial denture, medication packaging
- 80-90% pass spontaneously
- 10-20% endoscopic removal
- 1% surgical removal

Intentional ingestion:

- Cutlery, toothbrush, pen, glass piece, body packing
- 63-76% endoscopic removal
- 12-16% surgical removal

Symptoms foreign body ingestion

GI:

Dysphagia

Retrosternal pain

Vomiting

Hypersalivation

Pulmonary:

Stridor

Dyspnoe

Complications:

Fever

Peritonitis

Subcutaneous crepitus

Swelling of neck or chest

Evaluation foreign body ingestion

X-ray:

Presence, location, size, configuration, number

Free mediastinal/peritoneal air, subcutaneous emphysema

47% false negative!

CT-scan:

Fish/chicken bone, toothpick (sensitivity 90-100%)

Perforation

ESGE Guideline, Endoscopy 2016
ASGE Guideline, GIE 2011

Treatment foreign body ingestion

Conservative outpatient: small, blunt objects

Clinical observation: body packers

No endoscopic removal!

Surgery in case of rupture

Endoscopy

Surgery

Timing of endoscopic treatment

Emergent endoscopy (< 2-6 hours):

- Disk battery in esophagus
- Sharp object in esophagus

Urgent endoscopy (< 24 hours):

- Sharp objects in stomach or duodenum
- Objects > 6 cm in stomach or duodenum
- Magnets and batteries in stomach or duodenum

Non-urgent endoscopy (< 72 hours):

- Objects in stomach with diameter > 2.5 cm

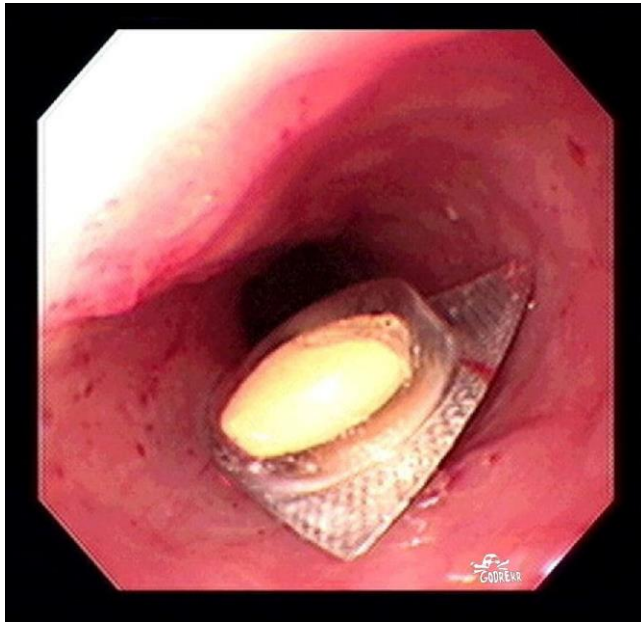
ESGE Guideline, Endoscopy 2016
ASGE Guideline, GIE 2011



**What
you
see**



**What
a 3-year-old
sees**



TUCHTRECHT



NIET -
ONTVANKELIJK

ONGEC
AFGEV

Arts onderschat gevaar ingeslikte batterij, met fataal gevolg

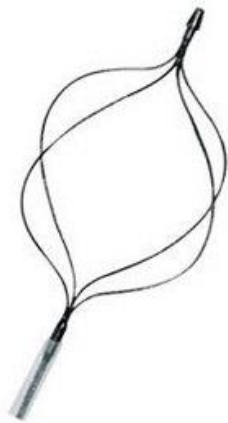
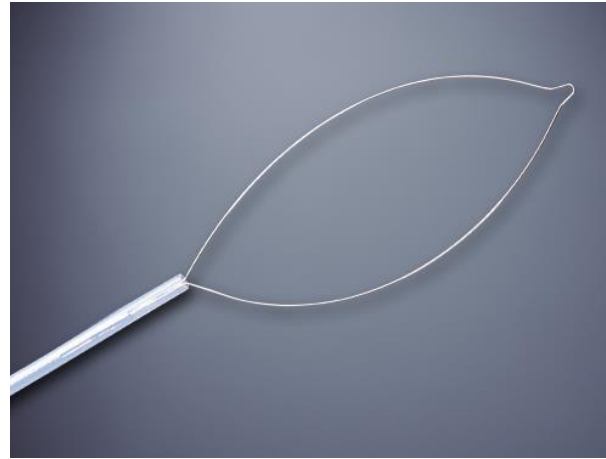
Dokters horen hun vakliteratuur bij te houden. De huisarts in deze tuchtzaak had daarmee mogelijk een drama kunnen voorkomen.

niet dat zoiets potentieel zeer gevaarlijk is; de richtlijnen handelen hier niet over. Toch vindt het tuchtcollege dat de huisarts dit had moeten weten; het had wel

slokdarm en aorta. Zo veroorzaakt door dat tuchtrechter toont be leerd ingeslotten op

Medisch Contact 25 feb 2016

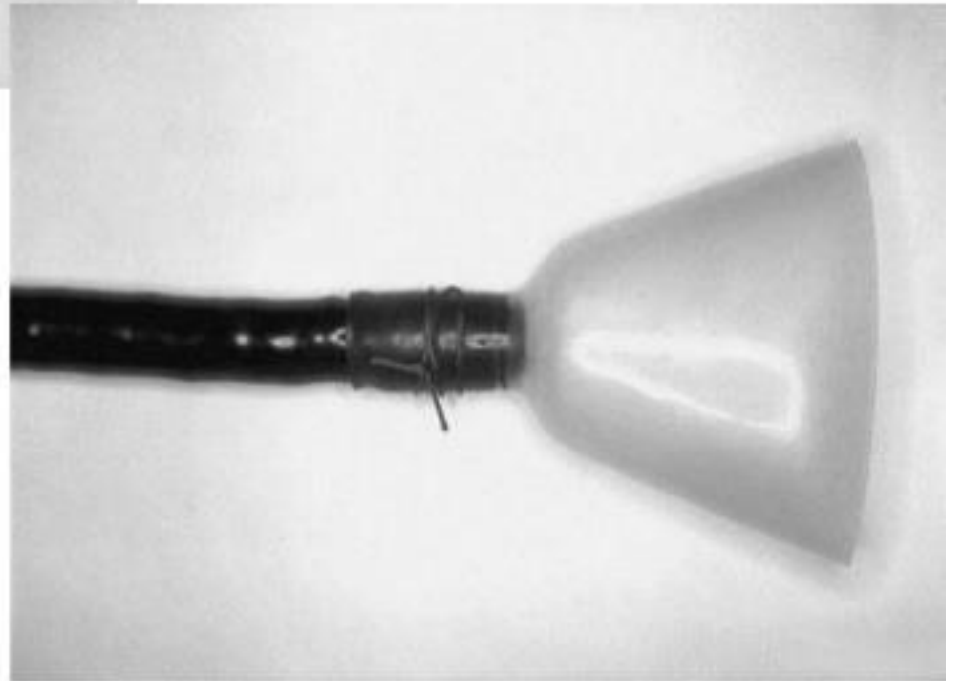
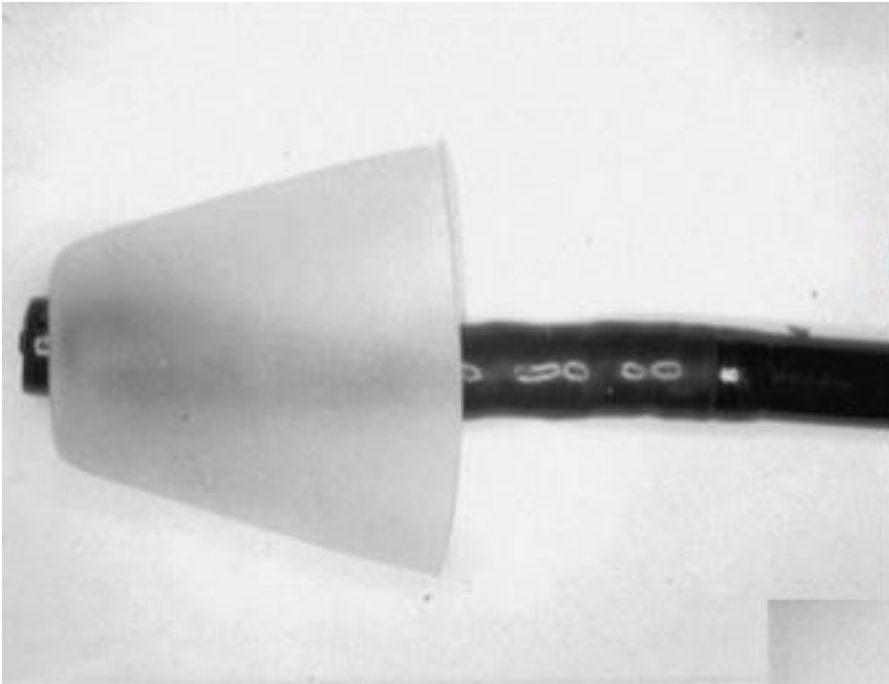
Endoscopic tools



Overtube



protector hood

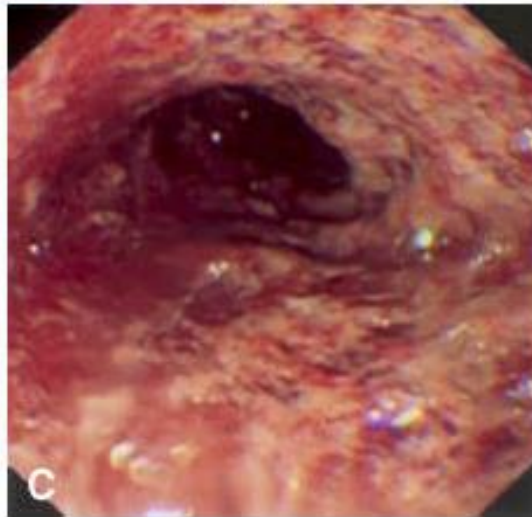
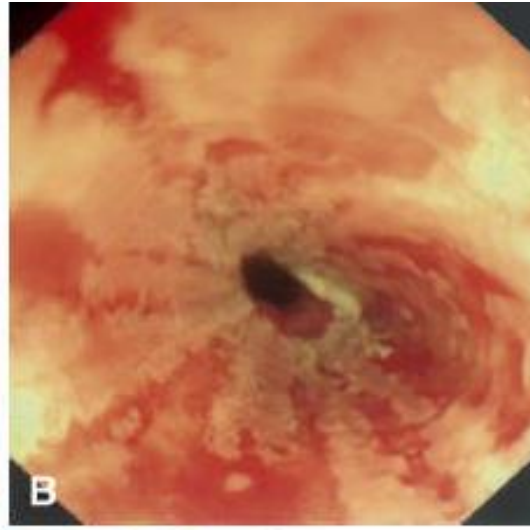
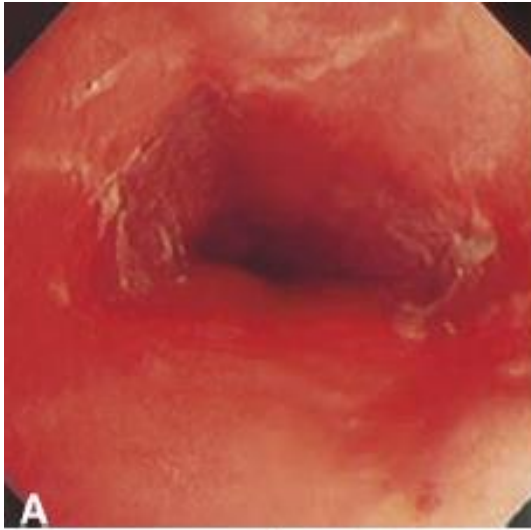






Isala





Caustic injury of upper GI tract

> 5000 per year (USA)

Accidental:

Children

Household cleaning products

Intentional:

Psychotics

Suicide

Glacial acetic acid, HCl, NaOH

Mortality: 5-15%

Contini et al, World J Gastroenterol 2013

Clinical presentation caustic injury

GI:

Retrosternal or abdominal pain

Dysphagia

Hematemesis

Pulmonary:

Stridor

Hoarseness

Dyspnea

Local complication:

Perforation

Systemic complications:

Renal and hepatic insufficiency

Hemolysis

DIC

Management caustic injury

Conservative outpatient

Clinical observation:

endoscopy < 24 hours

feeding tube

ICU admittance

Emergency surgery

Endoscopic grading caustic injury

Grade 0: normal

Grade 1: superficial mucosal edema and erythema

Grade 2: mucosal and submucosal ulcerations

Grade 3: transmural ulcerations and necrosis

Prognosis:

Grade 1: no significant morbidity

Grade 2: 70-100% stricture formation

Grade 3: early mortality, esophageal resection

Contini et al, World J Gastroenterol 2013
Poley et al, GIE 2004

Caustic injury esophagus

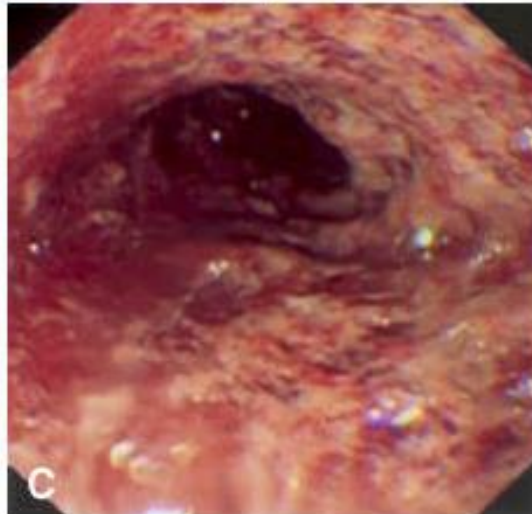
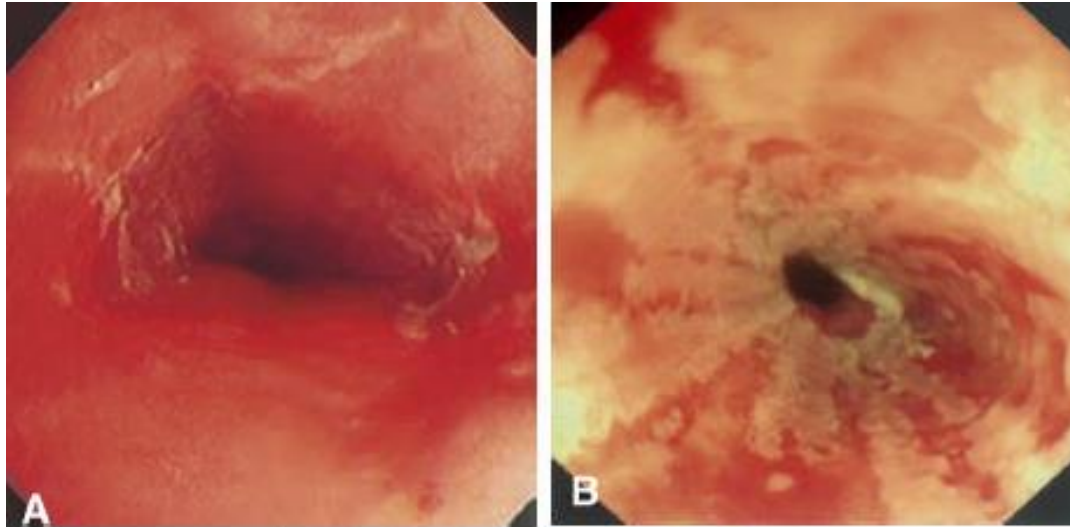


Table 4. Endoscopic grading of mucosal damage

Agent (%)	Endoscopic grade (%)			
	0	1	2	3
GAA (n = 85)	8 (9)	17 (20)	32 (38)	28 (33)
Alkali (n = 94)	21 (22)	27 (29)	21 (22)	25 (27)
Total (n = 179)	29 (16)	44 (24)	53 (30)	53 (30)

GAA, Glacial acetic acid.

Median score GAA = 2; median score alkali = 1; $p = 0.013$ for difference in distribution.

Poley et al, GIE 2004

Table 3. Outcome and survival for 179 patients with caustic ingestion

	Acid (n = 85)	Alkali (n = 94)	<i>p</i> Value
Mean hospital stay, d	9.9	7.2	0.01
Admittance to ICU	37 (44%)	21 (22%)	0.002
Systemic complications			
Renal insufficiency*	12 (14%)	1 (1%)	
Hepatic dysfunction †	12 (14%)	2 (2%)	
DIC	10 (12%)	2 (2%)	
Hemolysis	14 (16%)	1 (1%)	
Total	20 (24%)	3 (3%)	<0.001
GI complications			
Perforation	6 (7%)	0	0.017
Stricture	13 (15%)	16 (17%)	0.75
Fistula	0	1 (1%)	
Mortality			
From systemic complications	9 (11%)	1 (1%)	
From GI complications	3 (3%)	1 (1%)	
Overall mortality	12 (14%)	2 (2%)	0.003

Late complications of caustic injury

Esophageal strictures:

- 30% of patients

- Poor functional outcome

- Start dilating after 3-6 weeks

- Autodilatation

- Elective esophageal resection

Esophageal squamous cell carcinoma:

- 1000 x increased

- Gastric cancer not increased

- Interval 13-71 years

- Start surveillance after 15-20 years, every 1-3 years

ASGE recommendation

Take home message

Food impaction:

- Emergent endoscopy
- Underlying pathology
- Push and/or extract

Foreign body ingestion:

- Disk battery or sharp object in esophagus: emergency!
- Overtube and/or protector hood

Caustic injury:

- Grading endoscopy
- Morbidity and mortality
- Late complications: strictures and cancer

Literature

Birk M et al. Removal of foreign bodies in the upper gastrointestinal tract in adults: European Society of Gastrointestinal Endoscopy (ESGE) Clinical Guideline. *Endoscopy* 2016;48:1-8