Corso Nazionale SIED UDINE | 25-27 Settembre 2019

LE COMPLICANZE IN ENDOSCOPIA DIGESTIVA

Sessione Casi clinici:
MIOTOMIA PER VIA ENDOSCOPICA (POEM)

40 sleepless nights

Pietro Familiari

ENDOSCOPIA DIGESTIVA CHIRURGICA
FONDAZIONE POLICLINICO A. GEMELLI IRCCS – ROMA
UNIVERSITA' CATTOLICA DEL SACRO CUORE

CENTRE FOR ENDOSCOPIC RESEARCH, THERAPEUTICS AND TRAINING (CERTT)

EUROPEAN ENDOSCOPY TRAINING CENTER

Theoretical risks and complications associated with POEM (some of them unexpectedly rare) - I

- Surgery = asepsis; sterile devices → clean procedure
  Endoscopy = contaminated, non-sterile devices → dirty operative field
- Mediastinum is a sacred space.
  Mediastinal infections usually (really) severe.
- Iatrogenic and spontaneuous esophageal perforation associated with high mobidity and mortality (ie: Boeherave syndrome)
- *Is endoscopic closure of full thickness defects really reliable?*
- Theoretical high risk of infections and mediastinitis

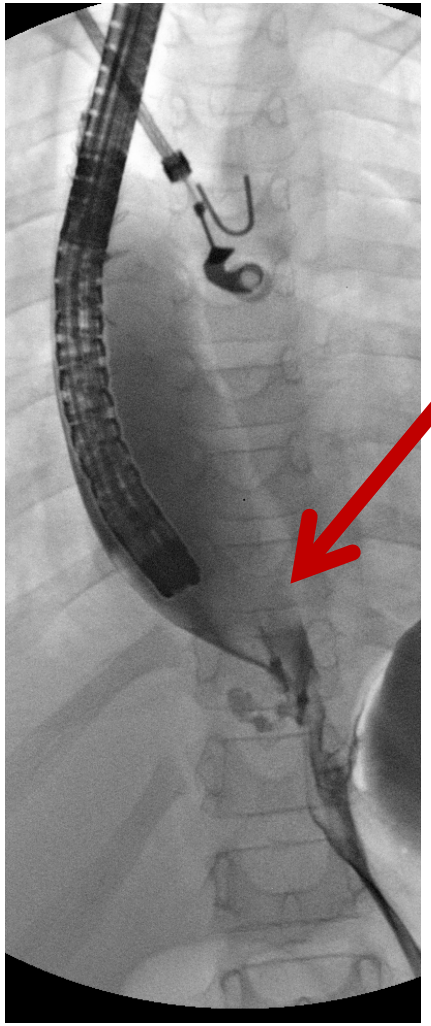
Despite theoretical risks
POEM is extremely safe
(0.5-2% moderate to severe complications)

Common perception:

it is safer than pneumatic balloon dilation!

AEs & immediate outcomes

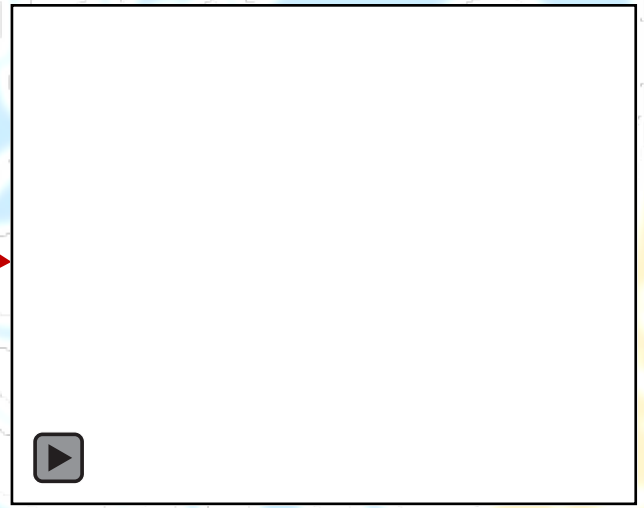
05.2011 – 23.09.2019: 733 POEM



- **Mild complications: 12 (1.6%)**
  2 mild delayed bleedings
  2 asymptomatic esophageal leak after POEM failure
  2 ab-ingestis pneumonia
  2 mucosal flap tearing and food entrapment
  2 pleural effusion and fever
  1 very big and deep ulceration mucosal flap
  1 pulmunary embolism

- **Severe complication: 2 (0.27%)**
  1 mucosal flap necrosis & esophageal stricture

  1 big peri-esophageal hematoma + GI bleeding & anemia
  + pleural effusion & infection



… 40 sleepless summer nights

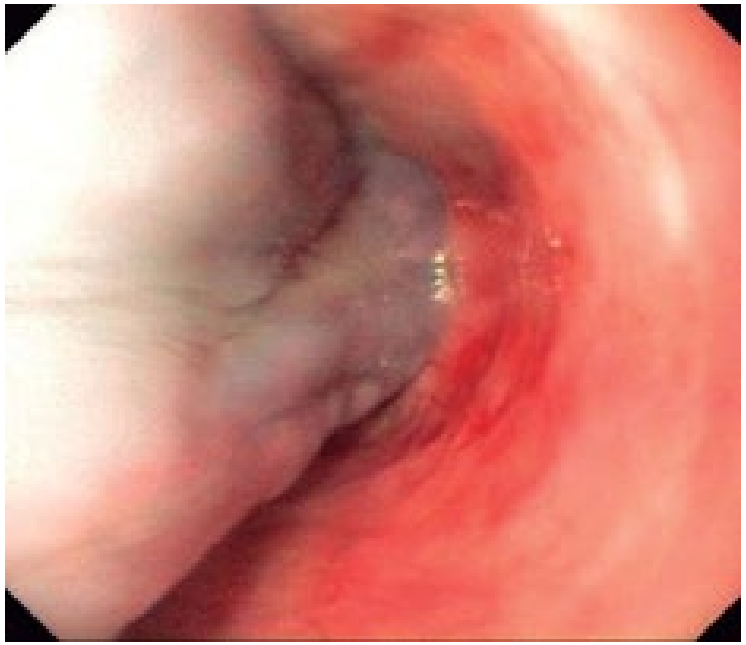
20 yr male, w/ type II achalasia - No comorbidities

(High School diploma at the end of June . Holidays in Formentera at the beginning of July)

Uneventuful POEM on June 6 – POEM#354

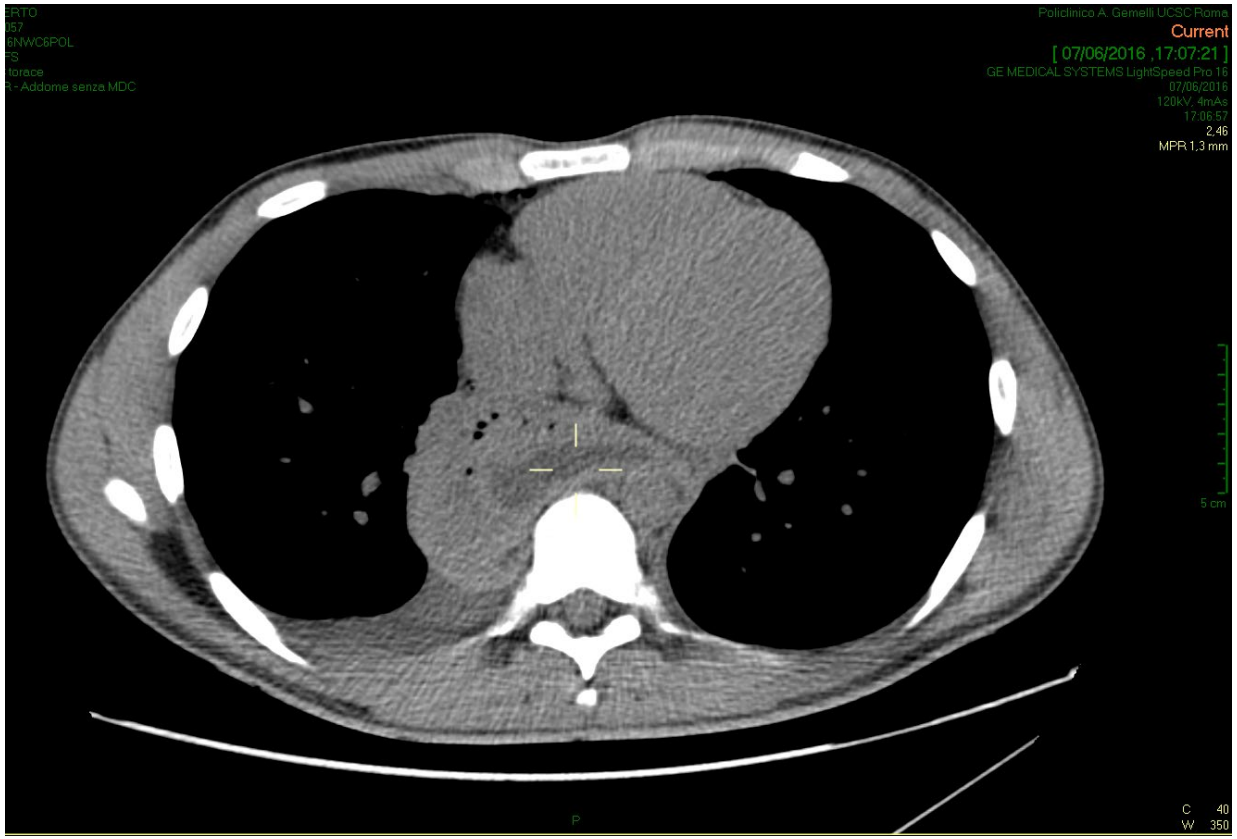
Mild chest pain and tachycardia in the afternoon

1d f/u EGD:
vast esophageal hematoma of distal esophagus
+ substantial luminal reduction
+ blood and clots in the stomach



LE COMPLICANZE IN ENDOSCOPIA DIGESTIVA

II

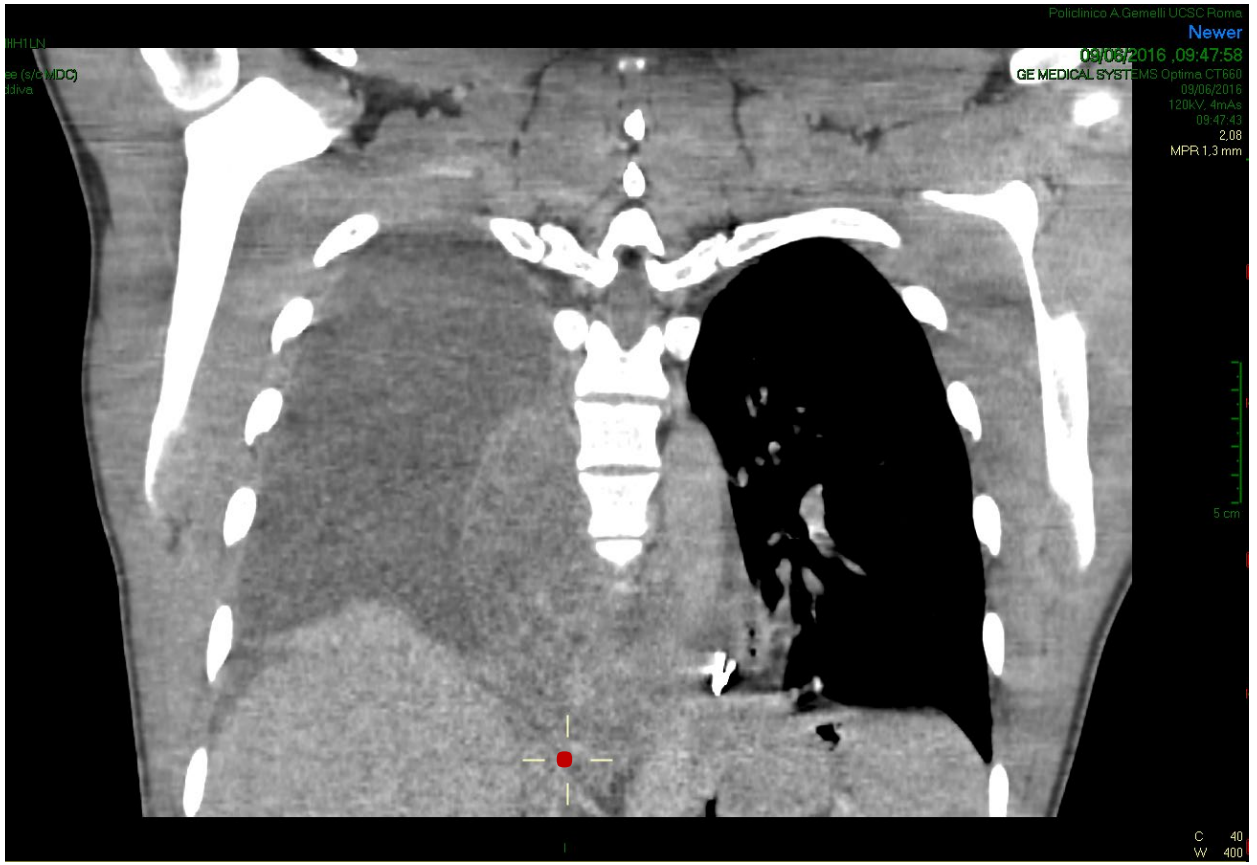


13cm x 3cm hematoma + mild pneumo-mediastinum and –peritoneum

Drop hemoglomin 4g/dL

Clinical observation

After 2 days (June 9) severe abd pain (resistant to pain killers), fever and dyspnea… almost critical conditions→ CT-scan



Hematoma drained into the pleura.
Air bubbles everywhere: probable mucosal flap failure

IV

Surgical consultation: conservative, non-operative, management
Placement of a thoracic tube (June 9)

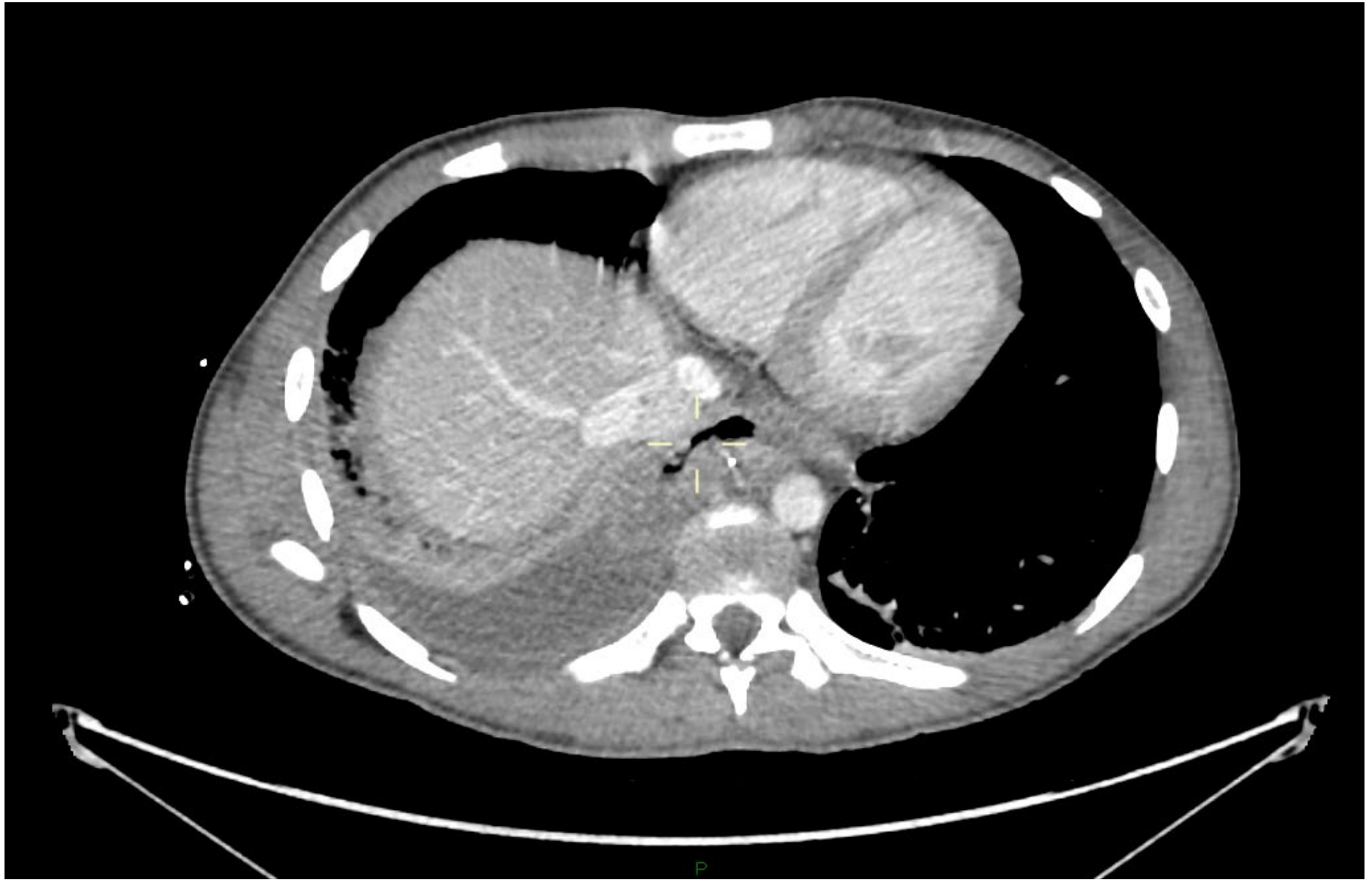
Antibiotics (Tazobactam/Piperacilline 4.5g TID, Fluconazol 400mg QD, Teicoplanin 600mg QD) + Thoracic tube → 800ml dark liquid

After 4 days (June 13):
… again abdominal pain, melena and drop in Hb levels (4g/dL)

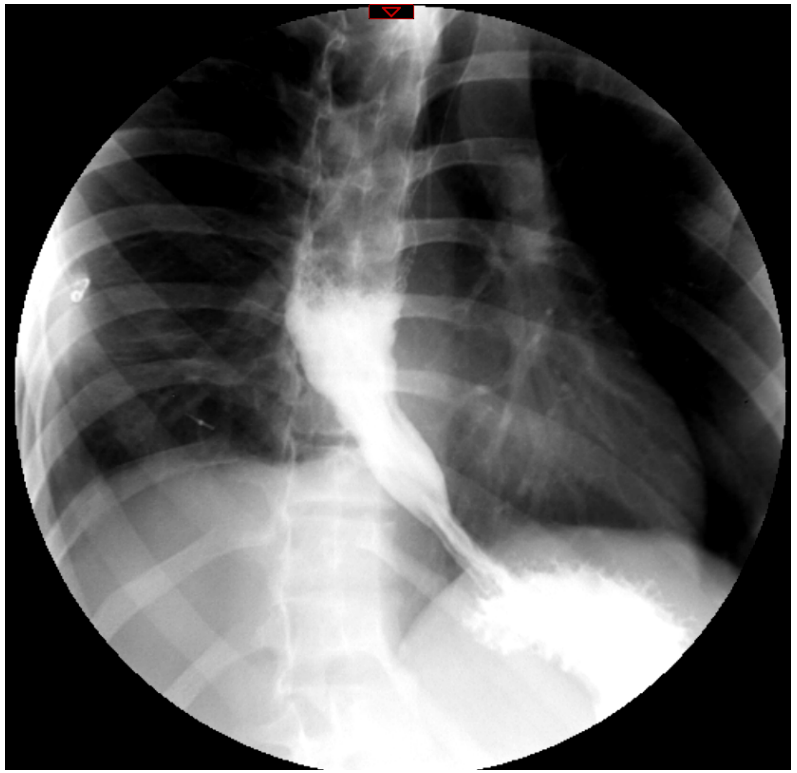
Angio CT-Scan: focal contrast enhancement at esophageal wall
Possible low flow leak

Angiography (Jun 13): no clear leak identified. Emobolization of a small intercostal artery with biodegradable material

LE COMPLICANZE IN ENDOSCOPIA DIGESTIVA

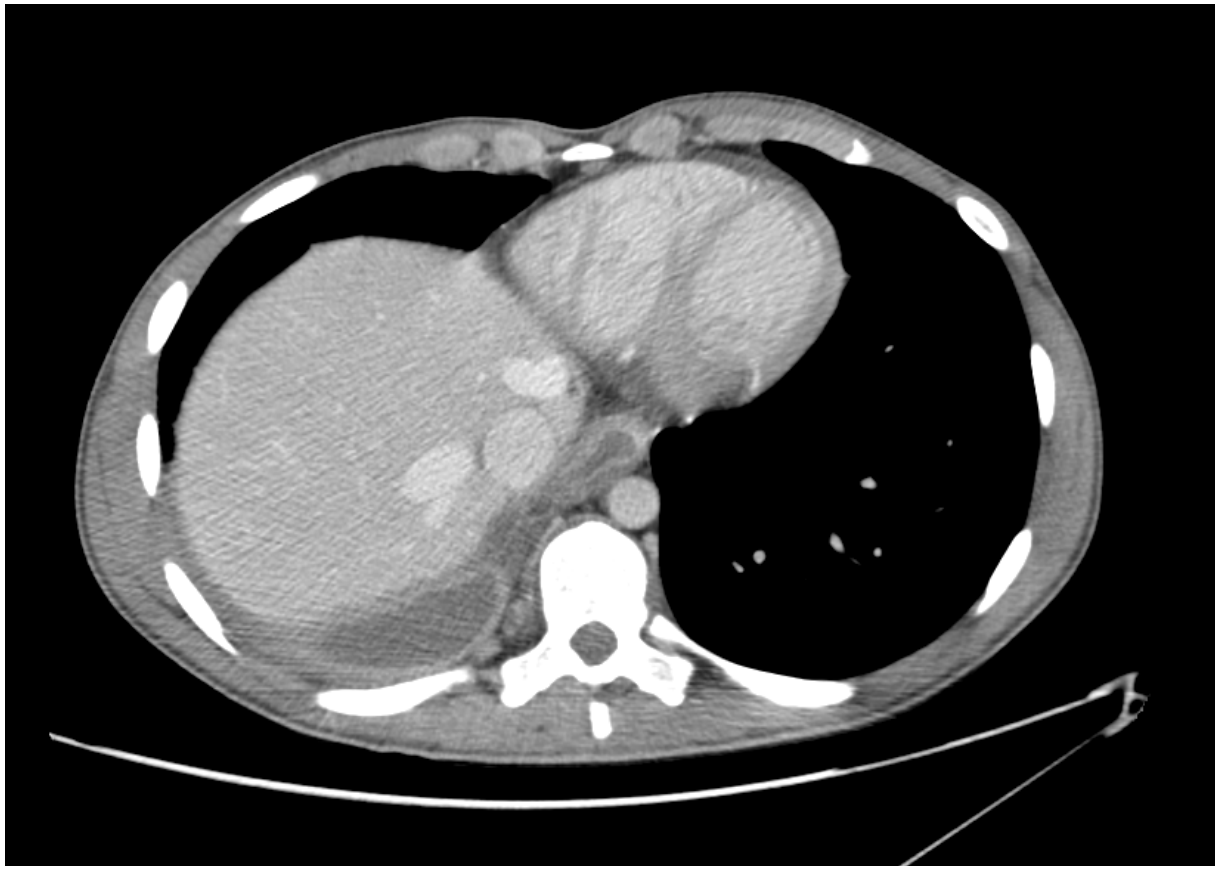


- After «blind» embolization, Bleeding stopped and reduction pleural effusion and hematoma size during following 14 days
- No fever, discontinuation antibiotics



…oral feeding! Complete disappearance dysphagia (June 27)

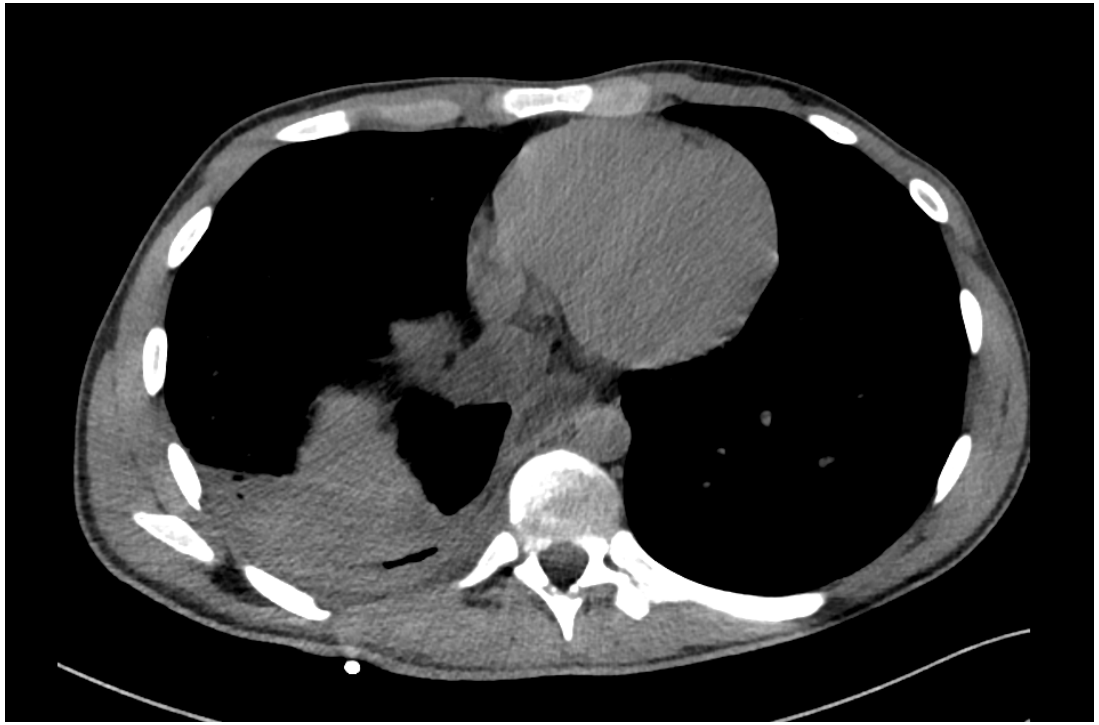
VI June 28 accidental removal thoracic tube
6 days later… fever and sepsis (Acinetobacter Baumanii) → Colistine 4-5 million UI BID



New thoracic drainage under CT-guidance (July 5)

VII

Removal of infected PICC (July 13)
Clinical conditions slowly improved
Resolution collections at CT scan (July 15) → Tube removal



Fever disappeared completely and persistently

Patient discharged, after 40 (long and extenuating) days in hospital (July 18)

LE COMPLICANZE IN ENDOSCOPIA DIGESTIVA

06 Jun 2016

POEM

7 Jun
EGD and fresh blood
Hematoma @ CT-scan
-4 g/dl drop of Hemoglobin

9 Jun
Pain→ CT scan: Hemothorax
Thoracic tube
Antibiotics

13 Jun
Again pain and acute anemia
CT-scan and Arterial embolization

23 Jun
Good clinical conditions
Stable hemoglobin – no fever
CT scan: reduced hematoma
and pleuric collection

28 Jun
Accidental removal
thoracic tube
Fever

27 Jun
Esophagram and EGD
Oral feeding
Stop antibiotics

4 Jul
Persisting fever. Test on pleuric fluid positive for
Acinetobacter Baumanii e Klebsiella oxytoca
Resume antibiotics (colistine)

5 Jul
CT scan: capsulate thoracic
fluid collection→Drain → Pus
Stop fever

13 Jul
Fever. Sepsis from PICC
S. Epidermidis w/ multiple resistences

15 Jul
CT-scan: reduction fludi collection
PICC removal → Stop fever

18 Jul
No fever, no dysphagia

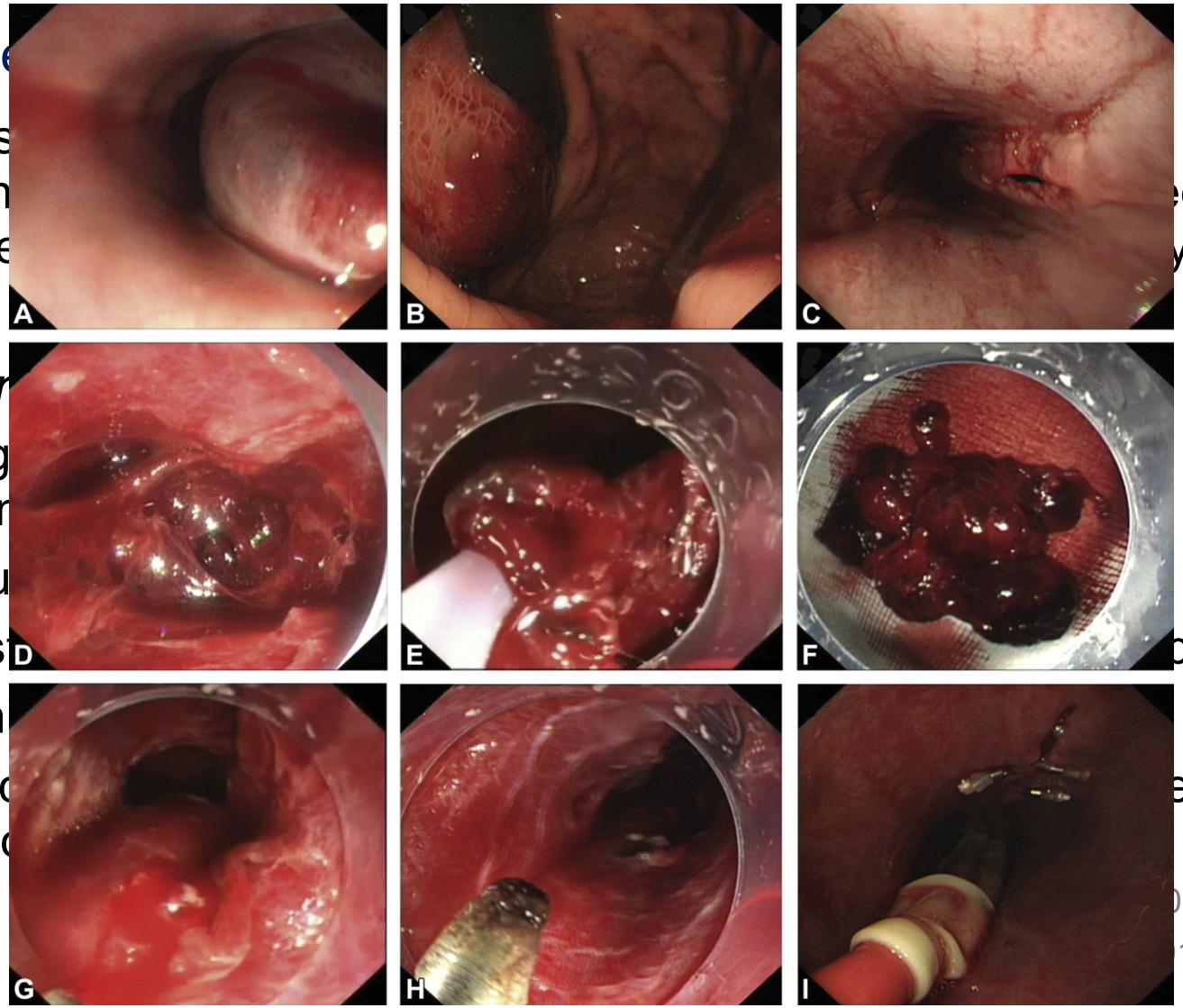
Discharge

Exams for High School Diploma during hospitalization!

LE COMPLICANZE IN ENDOSCOPIA DIGESTIVA

Management delaye

Diagnosis
severe ch eding!
Sometime y drained



Treatmer

- Emerg
  SM tur
- Coagu
- Sengst phagus
- Interm
- Gastric ement,
  the esc

013;78:370-374
16;48:967-978

Take home messages (I)

You're not digging an hole!
Be cautious when you perform a POEM. And respect vessels and mucosa

I'm superstitious
Apotropaic gestures and amulets are useful to fight evil eye and bad luck

Every complication is a case report
No standard and well defined treatment for severe complications
Relay on yourself, and local availability and competences

Surgeons are friends!
(even if some of them think they are a Demigod (my wife!)
When a severe complication occurs: the endoscopist is scared of potential consequences
the surgeon wants to solve the problem (operatively) ASAP!
Cooperate and dialogue with the surgeons. DO NOT BE passive or submissive!

Nature is marvelous!
With a little coolness… the vast majority of endoscopic complications can be solved CONSERVATIVELY!
(Prayers may help.)