

Udine - 26 Settembre 2019

“Le complicanze in endoscopia digestiva”



“Legatura e sclerosi di varici esofagee e gastriche”

- Caso clinico -

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Treviso

# Oesophageal & Gastric varices classification

|                       |  |
|-----------------------|--|
| Size                  | F1<br>F2<br>F3   |
| Extension             | L<br>M<br>S  |
| Color                 | White<br>Blu   |
| Red Color Signs (+/-) | Red wale marking<br>Cherry red spot<br>Hematocystic spot |
| Esophagitis (+/-)     |  |

## Gastro Esophageal Varices (GOV)



## Isolated Gastric Varices (IGV)



# Epidemiology

|                                | Incidence         |           |           |                  | Mortality         |           |           |                  |
|--------------------------------|-------------------|-----------|-----------|------------------|-------------------|-----------|-----------|------------------|
|                                | No. per 100,000/y |           |           |                  | No. per 100,000/y |           |           |                  |
|                                | 1983-1985         | 2002-2004 | % Change* | IR (95% CI)      | 1983-1985         | 2002-2004 | % Change* | IR (95% CI)      |
| All cases                      | 112.5             | 89.8      | -20.2     | 1.25 (1.11-1.41) | 17.1              | 8.2       | -52.1     | 2.14 (1.49-3.07) |
| <70 y                          | 91.4              | 49.3      | -46.1     | 1.85 (1.58-2.17) | 11.3              | 3.5       | -69.1     | 3.23 (1.89-5.52) |
| ≥70 y                          | 302.4             | 336.2     | 11.2      | 0.90 (0.74-1.10) | 72.7              | 36.6      | -49.7     | 1.99 (1.24-3.20) |
| Emergency admissions           | 100.8             | 74.5      | -26.1     | 1.35 (1.19-1.53) | 13.0              | 4.2       | -68.0     | 3.13 (1.98-4.95) |
| In-hospital patients           | 11.7              | 15.3      | 31.2      | 0.76 (0.55-1.05) | 4.4               | 4.0       | -9.3      | 1.10 (0.62-1.95) |
| Peptic ulcer                   | 66.5              | 47.6      | -28.4     | 1.40 (1.19-1.63) | 6.3               | 3.5       | -44.7     | 1.81 (1.05-3.12) |
| <70 y                          | 53.5              | 26.6      | -50.3     | 2.01 (2.42-3.71) | 3.0               | 1.2       | -60.9     | 2.56 (0.83-6.71) |
| ≥70 y                          | 183.7             | 175.7     | -4.3      | 1.05 (0.81-1.35) | 36.4              | 17.7      | -51.3     | 2.06 (1.04-4.04) |
| Duodenal ulcer                 | 40.6              | 29.8      | -26.6     | 1.36 (1.12-1.66) | 3.1               | 1.6       | -48.4     | 1.76 (0.73-4.29) |
| Gastric ulcer                  | 21.8              | 15.2      | -30.6     | 1.44 (1.08-1.92) | 2.9               | 1.8       | -37.9     | 1.48 (0.63-3.54) |
| Esophageal and gastric varices | 15.5              | 10.3      | -33.4     | 1.50 (1.08-2.09) | 6.7               | 1.8       | -72.7     | 3.66 (1.86-7.20) |
| No ulcer and no varices        | 30.5              | 31.8      | 4.5       | 0.96 (0.78-1.18) | 4.4               | 2.8       | -35.7     | 1.56 (0.83-2.91) |

IR, Incidence ratio.

\*Percentage change from the 1983-1985 period to the 2002-2004 period.

# Historical, current and possible future treatments for G-OE varices

## SURGERY

Esophageal stapling  
Esophagectomy  
Shunt (Splenoportal)

## ENDOSCOPY

Balloons tamponade  
Sclerotherapy (Polidocanol, Ethanol, Sodium Mordhuate ecc...)  
Band ligation  
Obstruent agents for Gastric Varices  
N-Butyl-2-Cyanoacrylate  
Thrombin  
Coiling (EUS)  
Stents  
Powders

## RADIOLOGY

TIPS (Transjugular Intrahepatic Portosystemic Shunt)  
BRTO, PARTO, CARTO (Retrograde Transvenous Obliteration)

## Current recommendations for acute bleeding endoscopic management

1. Ligation is the recommended form of endoscopic therapy for acute OE-V bleeding (1b; A)
2. Therapy with tissue adhesive is recommended for acute bleeding from IGV (1b; A) and those GOV2 (Fundus) that extended beyond the cardia (5;D)
3. EVL or tissue adhesive can be used in bleeding from gastroesophageal varices type 1 (GOV1 - Lesser curvature - 5;D)
4. To prevent rebleeding from gastric varices, consideration should be given to additional glue injection after two to four weeks (5;D)

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# Obstruent agents for bleeding gastric varices

87

Endoscopy 19 (1987) 87  
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## Endoscopic Treatment of Bleeding Gastric Varices with Bucrylate

Dear Sir,

In the January issue of *Endoscopy*, Prof. Soehendra et al. (1) described endoscopic obliteration of large esophago-gastric varices using bucrylate. I recently had occasion to verify the efficacy of this method in a case of life-threatening gastric variceal hemorrhage, and wish to bring this experience to your attention.

A 79-year-old woman with previously diagnosed diabetes mellitus and cryptogenic liver cirrhosis, Child's grade A, was hospitalized in April, 1986 for hematemesis and melena; emergency endoscopy excluded esophageal varices, but the upper two-thirds of the stomach were non-visualized due to active bleeding. She was managed conservatively with infusions, antacids, and i.v. ranitidine; however, fresh blood was continuously aspirated through a nasogastric tube. Following lavage with a 36 CH orogastric tube, a second endoscopy revealed intermittent bleeding from a large, prominent fundic varix, about 2 cm from the cardia. Since the patient was considered to be at high risk for surgery, conservative therapy was continued with the insertion of a Linton-Nachlas tube. Nonetheless, bleeding persisted, transient shock set in, and 8 units of blood were required. As a last resort endoscopy was repeated, and the bleeding gastric varix was injected with about 4 cc of Isobutyl 2-cyanoacrylate (Ethicon Bucrylate). Bleeding stopped immediately and did not recur; after 7 days the patient was ready for discharge. Endoscopic follow-up showed progressive protrusion of the polymerized material from the site of injection and from two other points about 1–2 cm away (Fig. 1). Three months after discharge the patient passed in her stool two small solid masses with a maximum length of 3 cm, which resembled two tortuous fundic varices (Fig. 2). Another endoscopic examination showed only one small residue of bucrylate attached to the fundic gastric wall. One month later, this had also disappeared.

Less recently, prior to the use of bucrylate, emergency surgery was performed in two other patients with cirrhosis, presenting with massive hemorrhage (first episode) from gastric varices as in the above case. One of them, a 57-year-old man, Child's grade B, had hemochromatosis, and died of postoperative hepatorenal syndrome, a complication which followed esophago-gastric devascularisation and esophageal transection. The other patient, a 44-year-old male with alcoholic cirrhosis, Child's grade A, survived a hemostatic procedure; but, some weeks later, bleeding recurred from the same site, and a complex elective shunt was successfully performed.

In conclusion, we found treatment with bucrylate to be safe and effective in stopping hemorrhage, and in obliterating large fundic varices; it is noteworthy that almost 4 months were required to eliminate this foreign body, and

no complications intervened. Therefore, despite a number of technical difficulties, this endoscopic therapeutic approach is very important, since not only is surgery in high-risk patients avoided, but bleeding recurrences are also prevented.

**References**

1. Soehendra, N., V. Ch. Nam, H. Grimm, I. Kempenert: Endoscopic obliteration of large esophago-gastric varices with Bucrylate. *Endoscopy* 18 (1986) 25

Dr. Silvano Loperfido, Servizio di Gastroenterologia, Ospedale (P.O.M. ULSS 10), Treviso, Italy

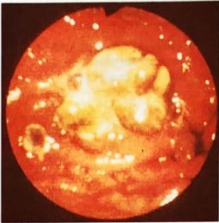


Fig. 1




Fig. 2

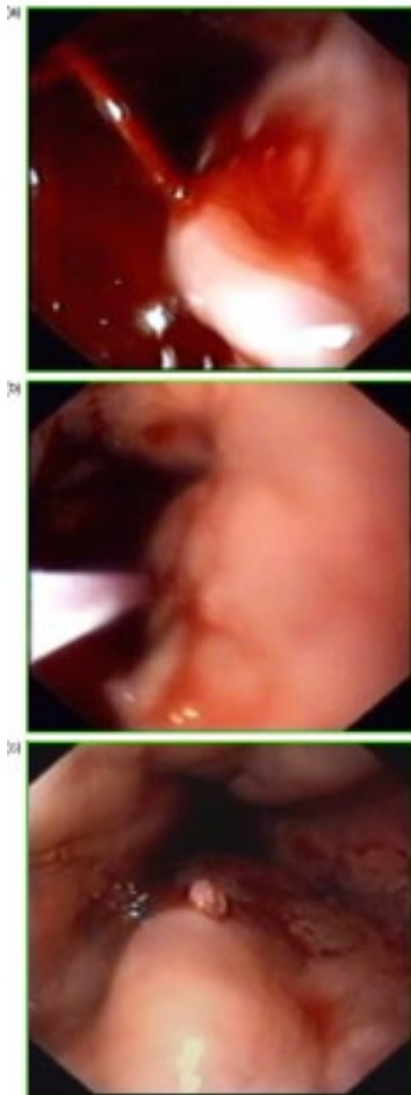
4cc

Isobutyl 2-cyanoacrylate  
(Ethicon Bucrylate)

79-year-old woman  
Cryptogenic live cirrhosis

Bleeding from a large fundic varix

## Acrylate glue injection for acutely bleeding from oesophageal varices



- Prospective study
- 202 consecutive cirrhotic patients admitted for hematemesis or melena (133 included)

- Active bleeders (52pts)

|                     |       |
|---------------------|-------|
| Initial haemostasis | 94.2% |
| Rebleeding          | 10.2% |
| Mortality (120h)    | 7.7%  |

- Non active bleeders (81pts)

|            |      |
|------------|------|
| Rebleeding | 5.2% |
| Mortality  | 1.2% |

No differences in hospital stay and transfusions



# Endoscopic treatments and possible complications

## Local complication

- Ulcers
- Bleeding
- Stricture
- Esophageal dysmotility
- Pain
- Odynophagia
- Laceration
- Local abscesses



## Regional

- Esophageal perforation
- Mediastinitis
- Acute gastric dilation
- Pleural effusion

## Systemic

- Sepsis
- PBS and candidemia
- Aspiration and hypoxia
- Respiratory distress syndrome
- Portal vein thrombosis
- Splenic infarcts
- Cerebral and pulmonary embolisms

## CASE REPORT

Maschio di 59 anni

Paziente in TAO, portatore di valvola aortica meccanica

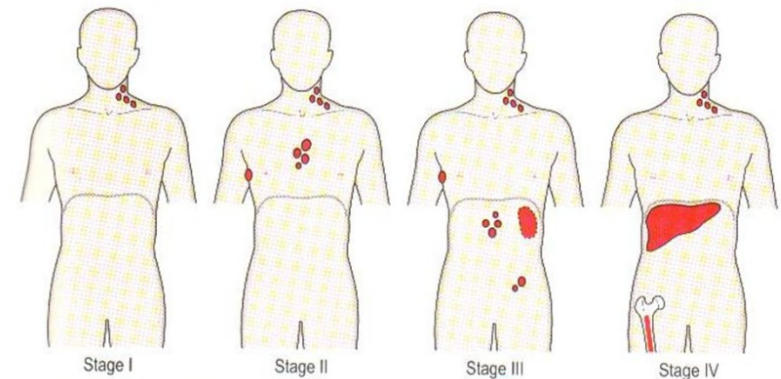
Trattato nel 1981 (22 anni prima) per LH sopra e sottodiaframmatico

CT (MOPP 6 cicli)

RT (mantellina e lomboaortici)

Splenectomia

In remissione al follow up ematologico

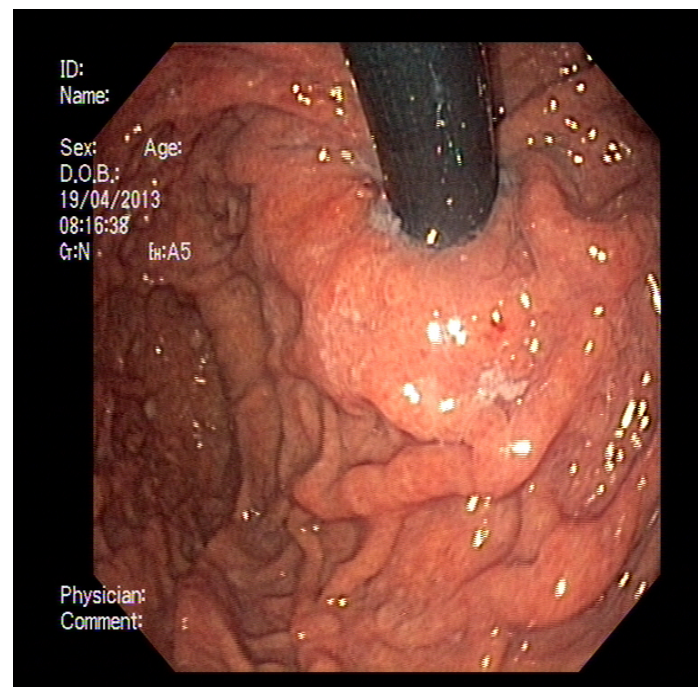
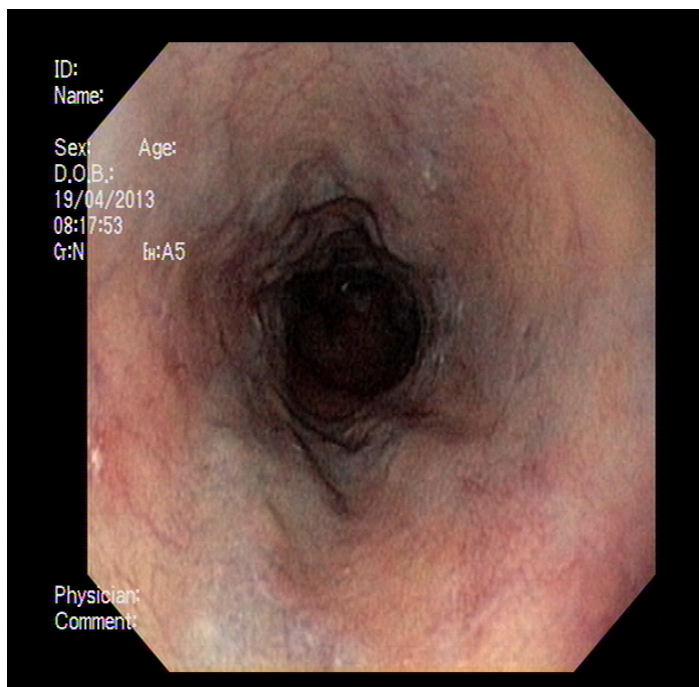


TAC (04.2013)

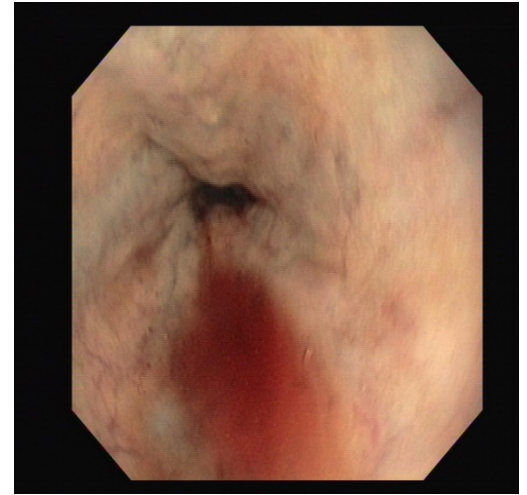
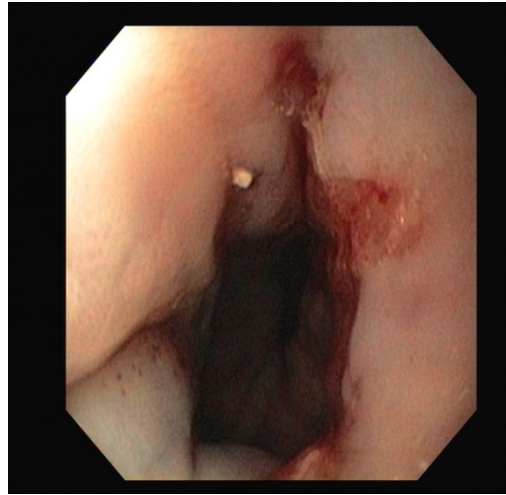
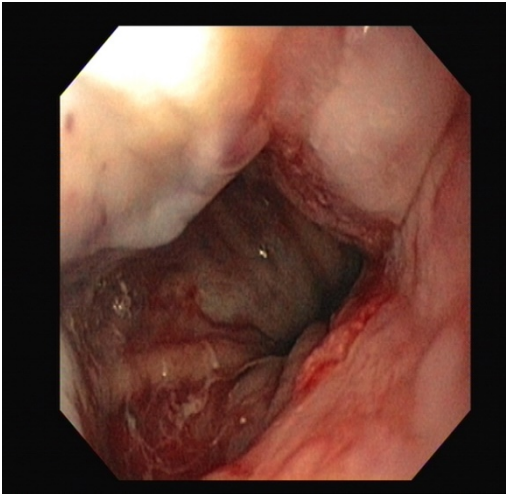
«Estesa trombosi della vena mesenterica e della vena porta sino all'origine del tronco principale, associata ad ampia cavernomatosi portale»

## Prima EGDS diagnostica (04.2013)

«Varici esofagee F1 (Cb, Lm, Rcs -).  
Note di gastropatia congestizia.»

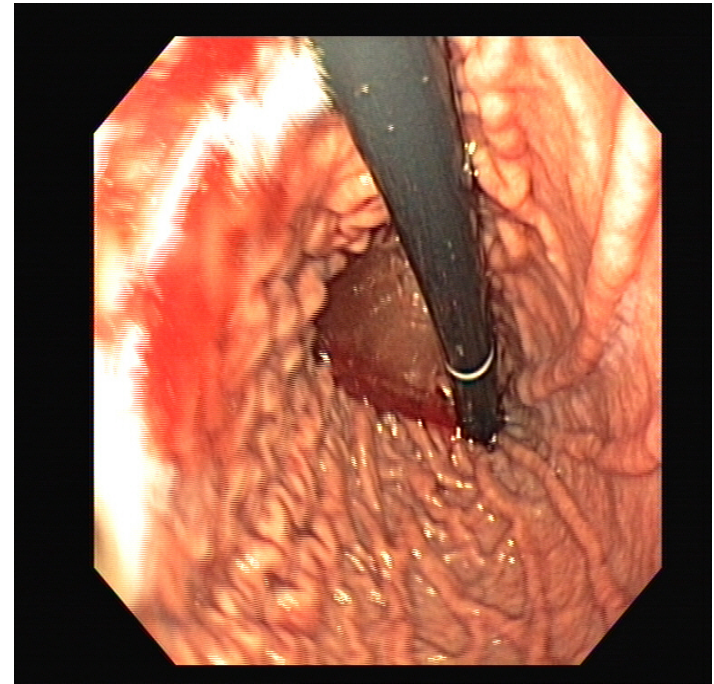
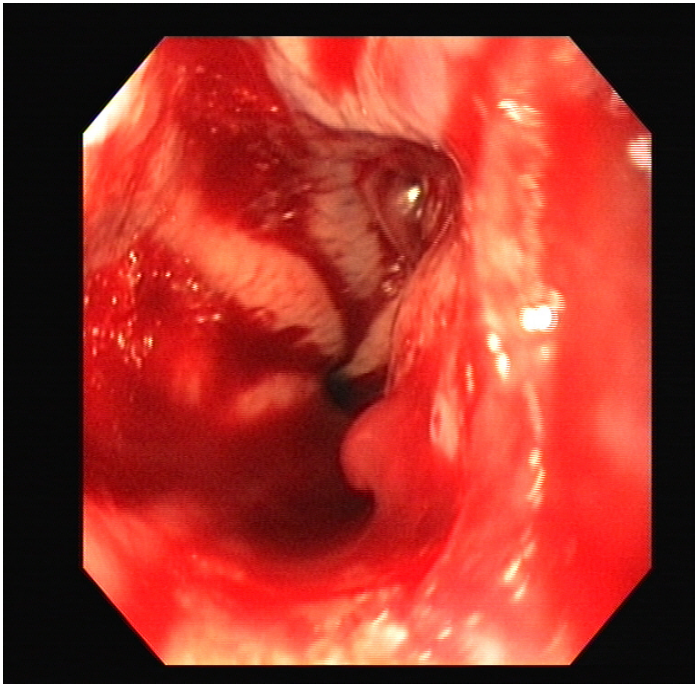


Dopo tre mesi .... primo evento emorragico



«Emorragia da varici esofagee in sede sovracardiale.  
Eseguita emostasi mediante infiltrazione di resina acrilica (1 + 1 ml).»

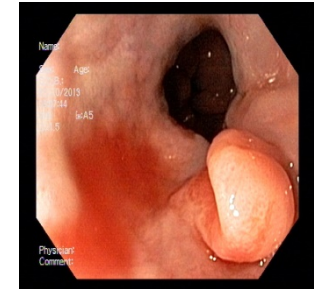
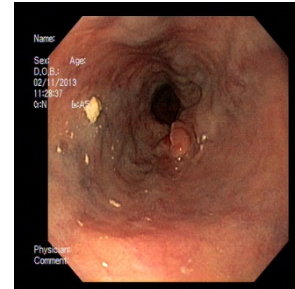
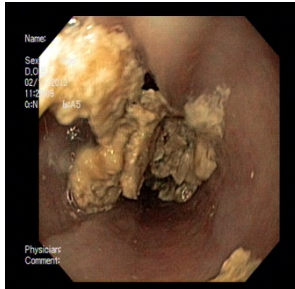
Dopo circa un mese... secondo evento emorragico



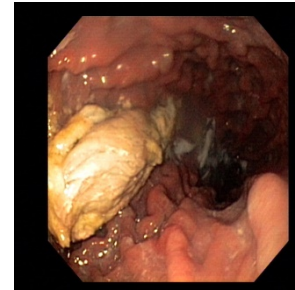
«Recidiva emorragica da varice della giunzione esofago-gastrica.  
Si esegue emostasi mediante iniezione di resina acrilica (Glubran 1ml).»

# Evoluzione...

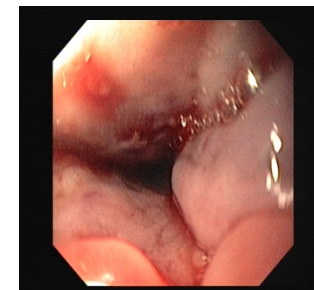
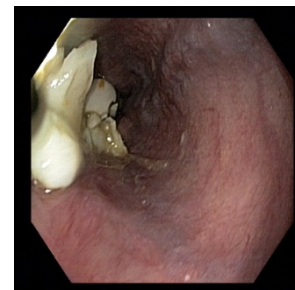
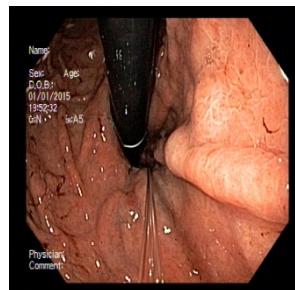
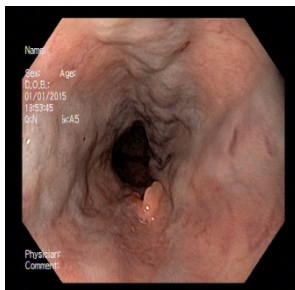
• 10/11/12.2013



• 3/11.2014



• 1/4/5.2015  
(+ Glubran 1ml)

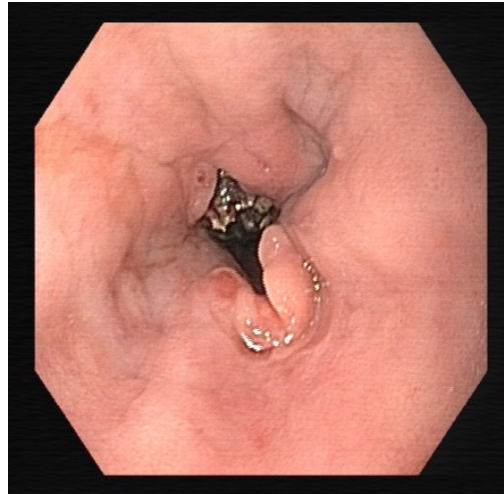
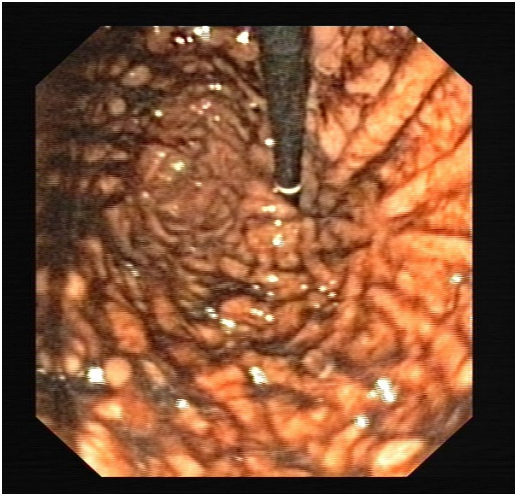


# RX tubo digerente



«Marcato ed irregolare ispessimento del rilievo mucoso a livello dell'esofago iuxtacardiale. Ridotto il calibro del viscere a tale livello. Rallentato il passaggio del m.d.c. in cavità gastrica»

Luglio 2015

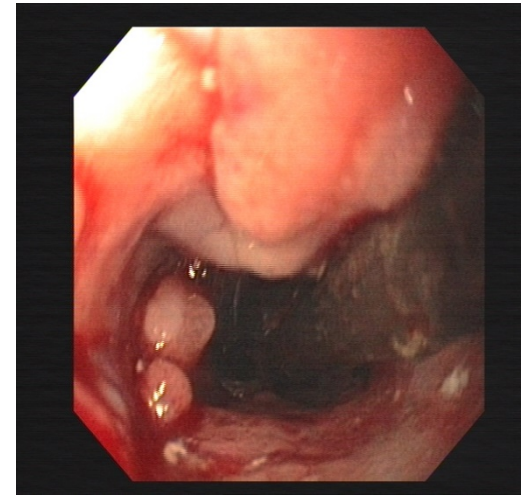
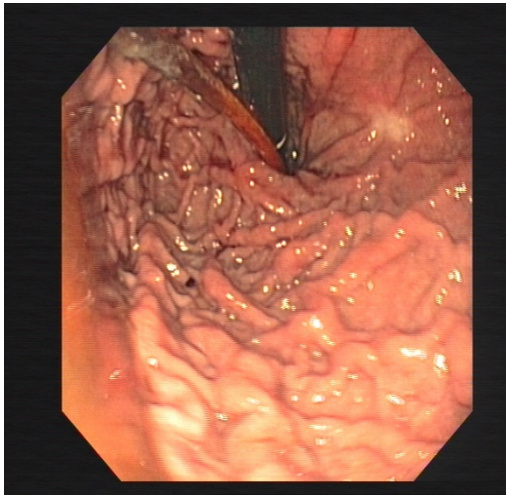


«Stenosi dell'esofago distale.

Possibile sanguinamento da lesione ulcerativa contestuale alla stenosi.»

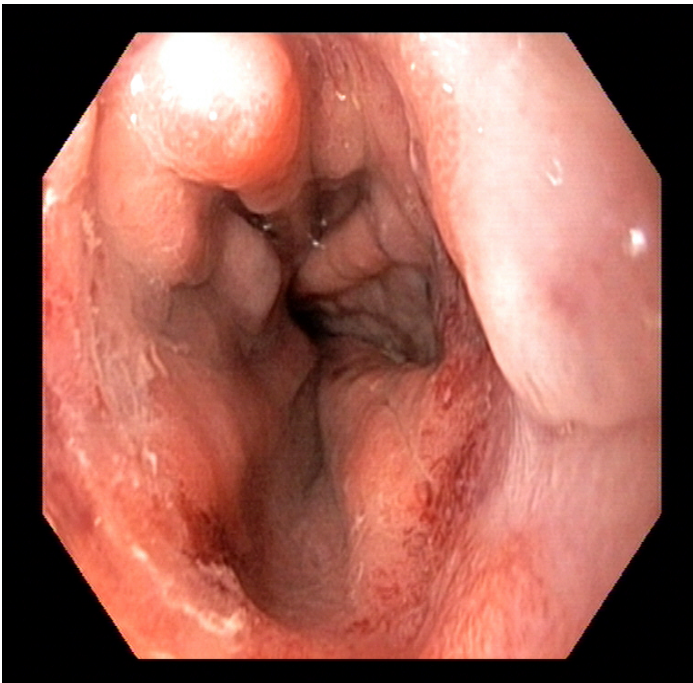


Settembre 2015



«Corpo estraneo in esofago. Oltre il corpo estraneo residua substenosi del lume, comunque valicabile pur in presenza di SNG.»

Dicembre 2015  
Ultima EGDS di controllo

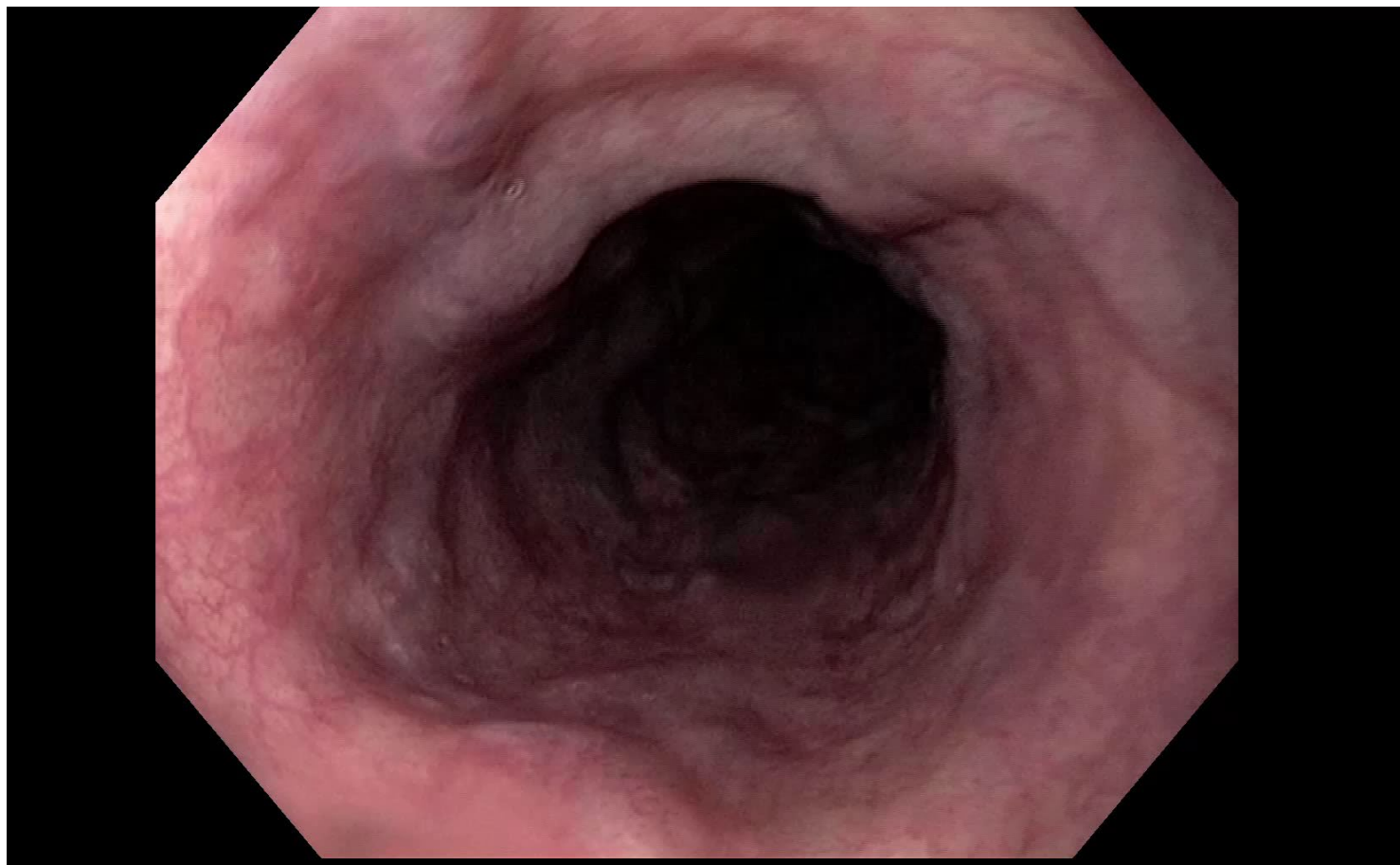


«Non più evidente la stenosi segnalata in precedenza a carico dell'esofago iuxtacardiale. Agevole il passaggio in stomaco. Giunzione squamo-colonnare iperemica, frastagliata.»

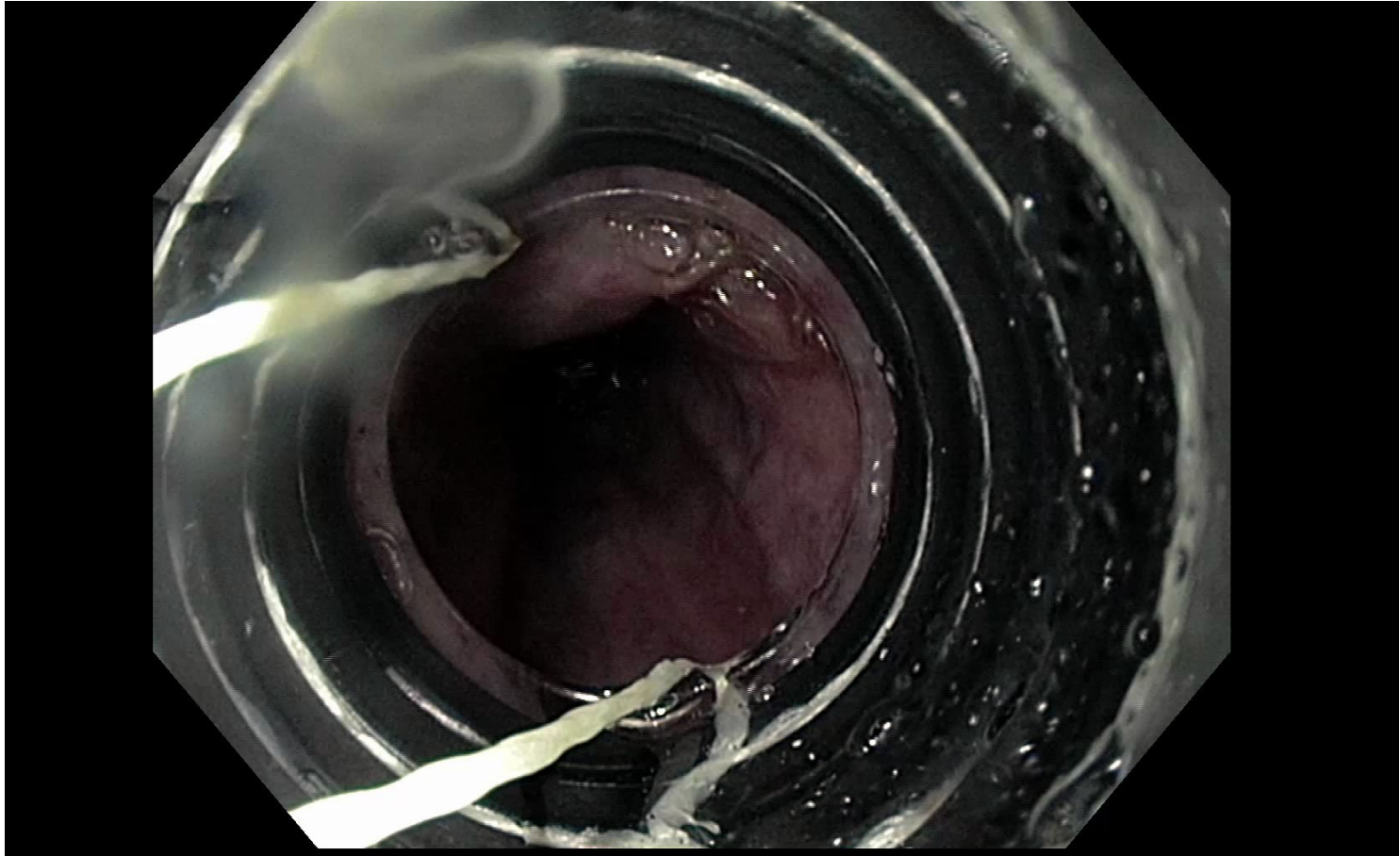
## Conclusioni

1. L'emorragia da varici esofago-gastriche resta una degli eventi più temibili nel paziente con ipertensione portale
2. Nella maggioranza dei casi quello endoscopico è il primo trattamento non farmacologico utilizzato
3. Alcuni dei trattamenti a disposizione possono essere utilizzati in maniera combinata
4. La scelta del trattamento iniziale può condizionare eventuali trattamenti successivi
5. COMPLICANZE!

## Conclusioni 2

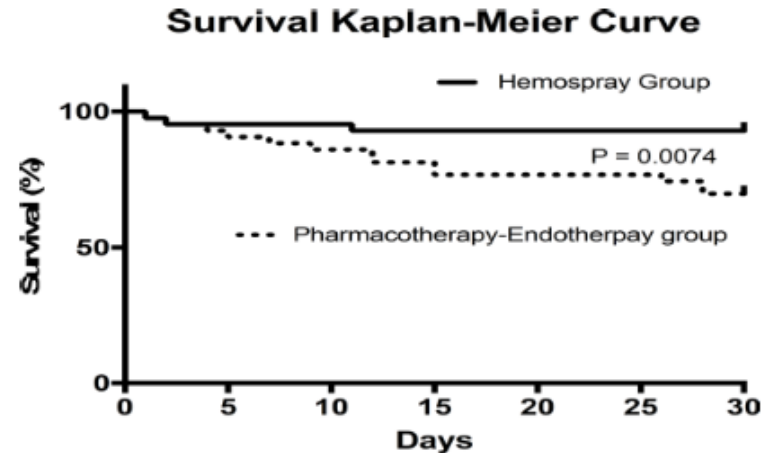
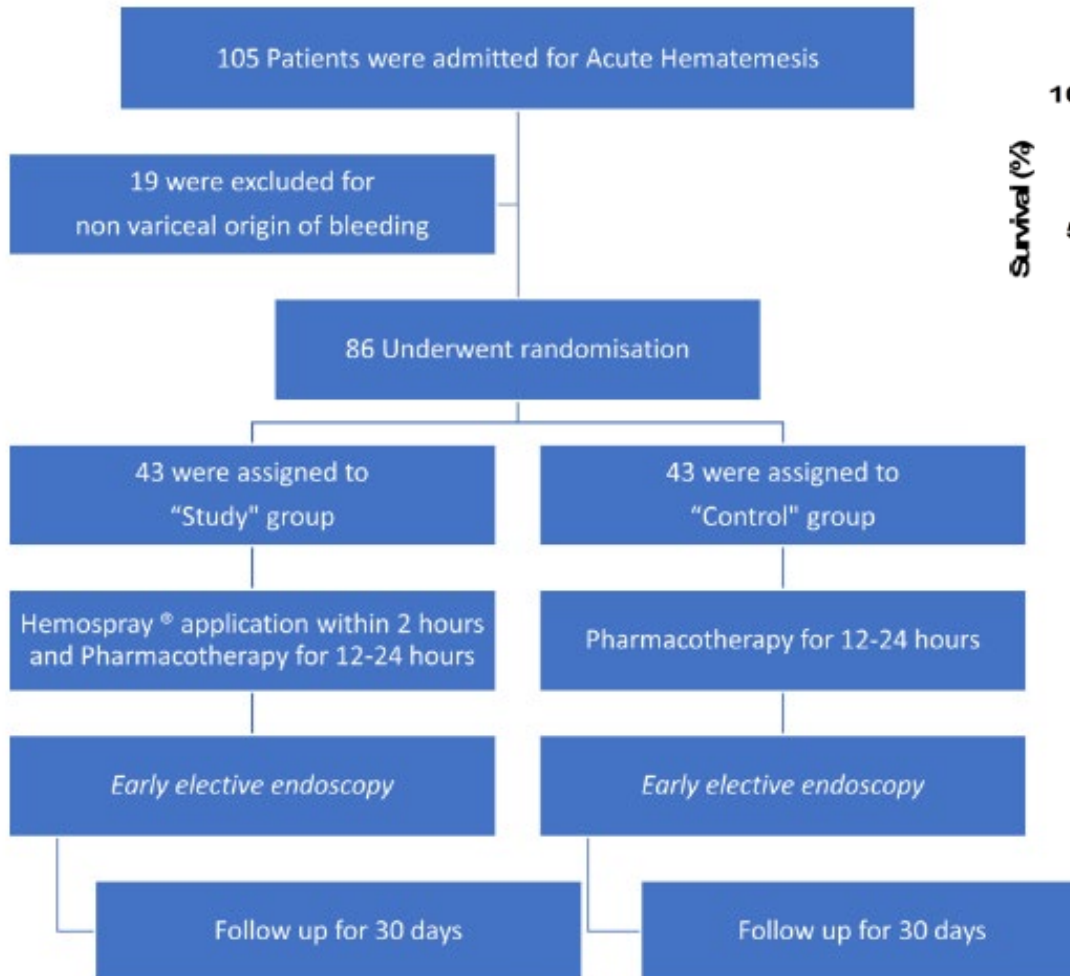


## Conclusioni 3



## Conclusioni 4

## Haemostatic powder and Standard management





**Corso  
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**LE COMPLICANZE  
IN ENDOSCOPIA  
DIGESTIVA**

**GRAZIE**



**UDINE | 25-27 Settembre 2019**

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**Maurizio Zilli** Direttore del Corso