



# Prophylactic transcatheter embolization in peptic ulcer bleeding (PUB) – A new Gold Standard?

S. Basche & M. Mille



## Upper GIB

Ulcus

Varicosis

Mallory-Weiss-S

Cancer

Oesophagus

Gaster

Duodenum



## Prognosis

- 80% of GI- bleedings suspend spontaneously
- 20% recidivate within 3 days after therapy
- Emergency operation up to 50 % (Mortality)



## Forrest classification

Category	Activity of bleeding	Recurrent bleed
I	Acute hemorrhage	
Ia	Spurting hemorrhage	90%
Ib	Oozing hemorrhage	30%
II	Recent hemorrhage	
IIa	Visible vessel	50 – 100%
IIb	Adherent clot	20 – 50%
IIc	Hematin on ulcer base	< 5%
III	Lesions without signs of recent hemorrhage	< 5%

# Recurrence bleeding (high risk)

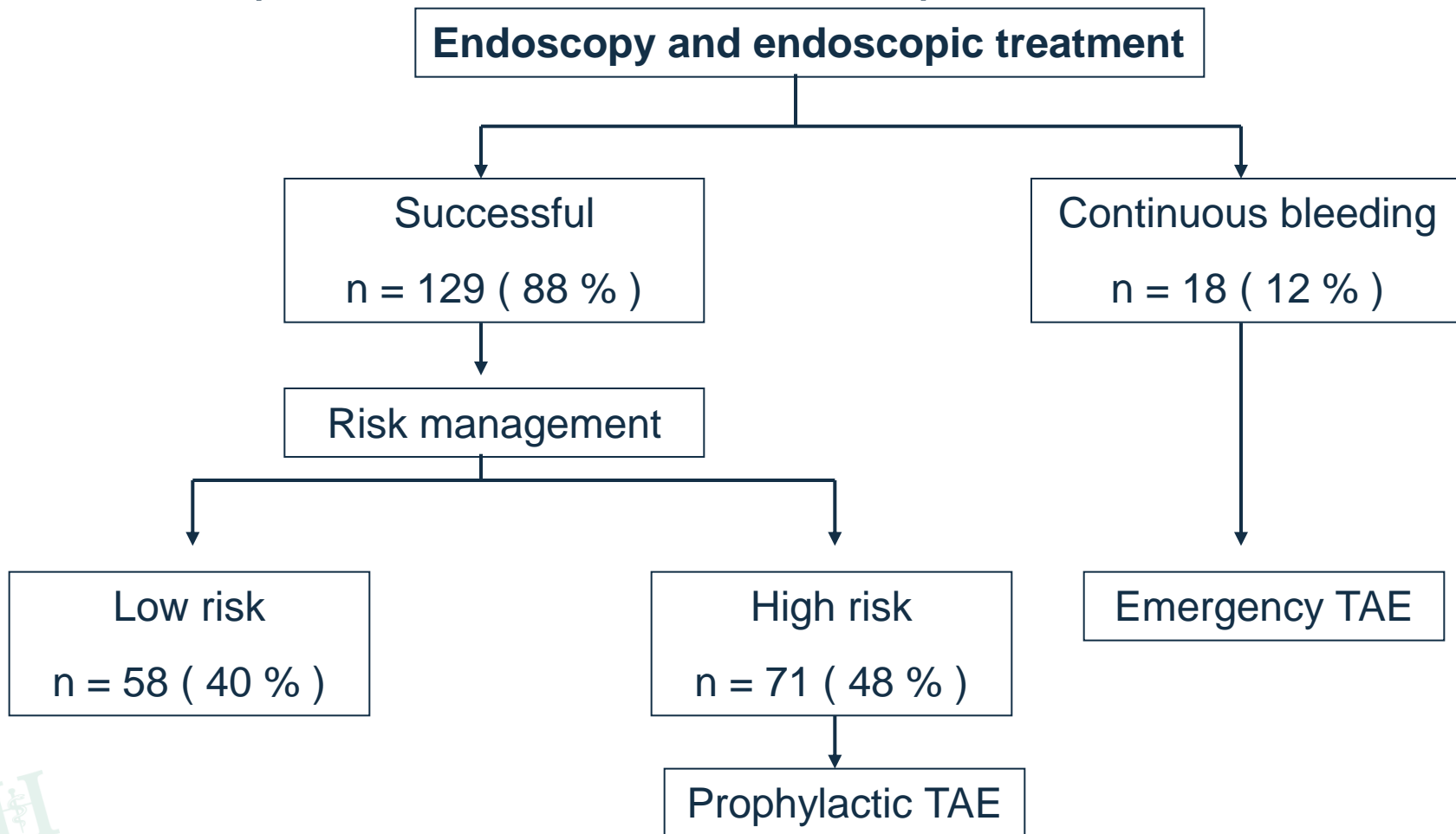


- Depending on:
  - Forrest Ia/Ib 55%
  - Forrest II 14 - 36%
  - ulceration size > 1cm
  - Localisation (posterior wall)
  - Age 70, 1%
  - Comorbidities and drugs (anticoagulation) 70%
  - Unsafety endoscopic therapy

# Results



n = 147 (recruitment 01-2008 – 12-2013)



# Results



	Prophylactic TAE (n=71)	uncontrolled bleeding TAE (n=18)
Contrast extravasation	7 (10%)	<b>9 (50%)*</b>
<b>TAE technique</b>		
Coils	<b>59 (83%)</b>	11 (61%)
Glue	2 (3%)	<b>4 (22%)</b>
Coils + Glue	10 (14%)	3 (17%)
<b>Technical success</b>	<b>69 (97%)</b>	<b>18 (100%)</b>
<b>Clinical success</b>	<b>61 (89%)</b>	<b>17 (94%)</b>
Minor complication	10 (14%)	1 (6%)
Major complication	2 (3%)	1 (6%)



- 2014 Meta-Analysis

Kyaw Moe et al.: Embolization versus surgery for peptic ulcer bleeding after failed endoscopic hemostasis: a meta-analysis. Endoscopy International Open 2014

	TAE	Surgery
Rebleeding	15-42%	8-23%
Mortality	3-26%	14-34%
Material	Coils, Gelfoam, Glue (10 %)	



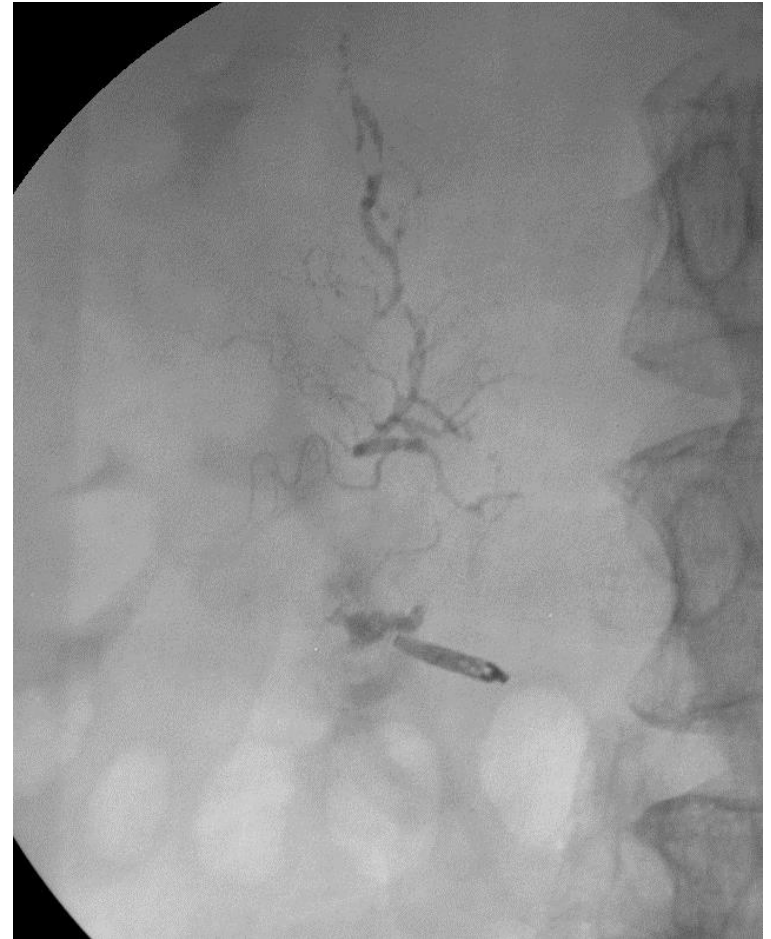
# Comments



Hwan JJ et al: Transcatheter Arterial Embolization of Nonvariceal Upper Gastrointestinal Bleeding with **N-Butyl Cyanoacrylate**.  
*Korean J Radiol 2007;8:48-56*

- n=32
- Success rate 100%
- Clinical success 91 %
- Material NBCA
- Highly effective in coagulopathy and complicated microcatheter advancement
- **No ischaemic complications!**

# Case 1



# Case 2





## Onset to Treat Time

- Early endoscopy (within 24 hours)
- Blood substitution

1. Marik P E, Corwin H L. Efficacy of red blood cell transfusion in the critically ill: a systematic review of the literature. *Critical Care Medicine* 2008; 36(9): 2667-2674.
2. Jairath V et al. Outcomes following acute nonvariceal upper gastrointestinal bleeding in relation to time to endoscopy: results from a nationwide study. *Endoscopy*. 2012 Aug;44(8):723-30.
3. Biecker E. Diagnosis and therapy of non-variceal upper gastrointestinal bleeding. *World J Gastrointest Pharmacol Ther* 2015 November 6; 6(4): 172-182



## Erfurt Results

Time to Endoscopy	3 h 15 min
Emergency TAE	< 60 min
Prophylactic TAE	4 h 33 min

Diagnosis and Therapy within 8 hours

# Summary



- Minimal invasive and safe
- Significant reduction of rebleeding
  - **act as soon as possible 24 / 7 !**
  - **Choose the best material !**
  - **Check the back flow !**

**Prophylactic Transcatheter Embolization is currently the GOLD STANDARD**



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