Achalasie
Aspects actuels

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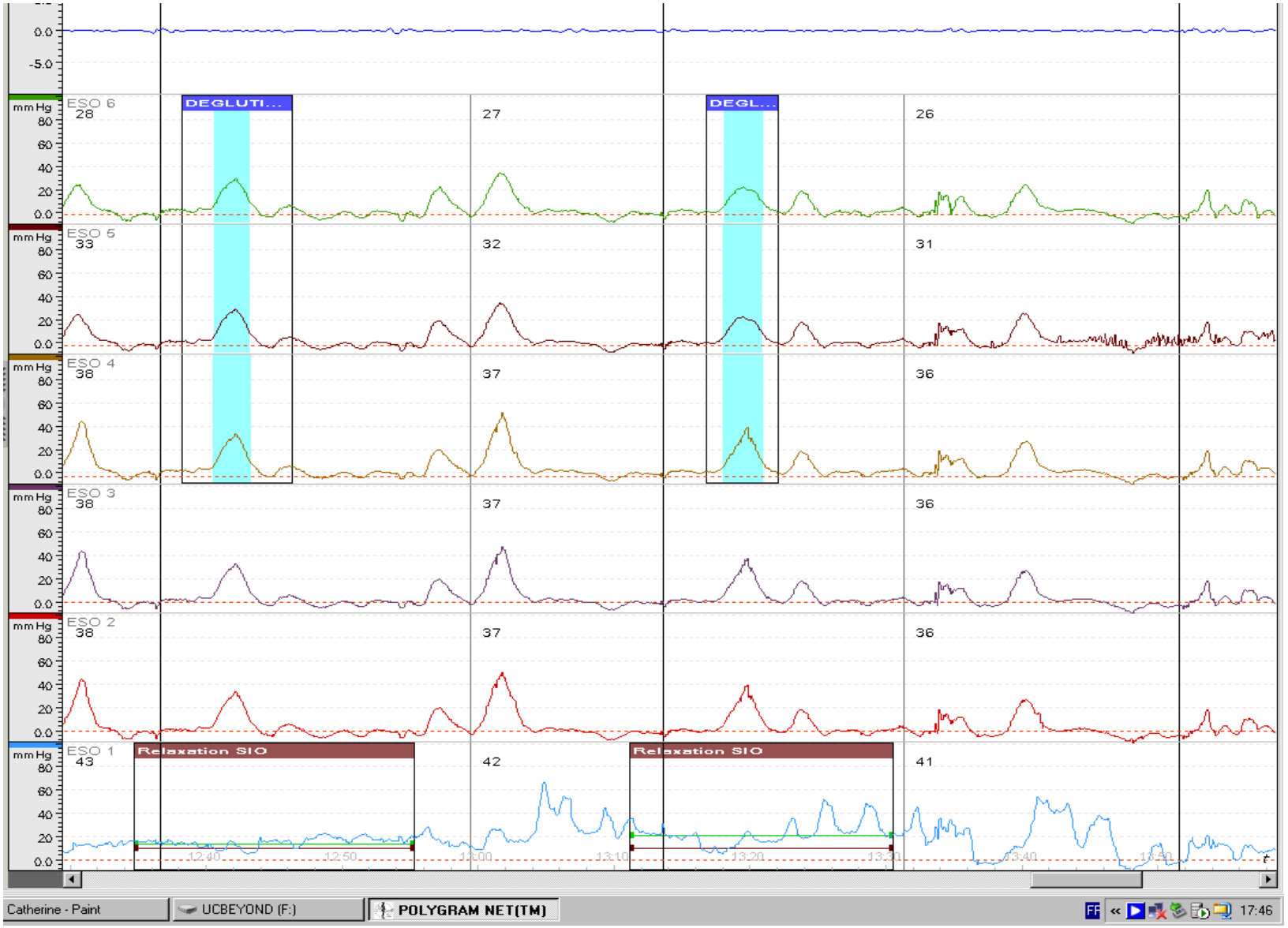
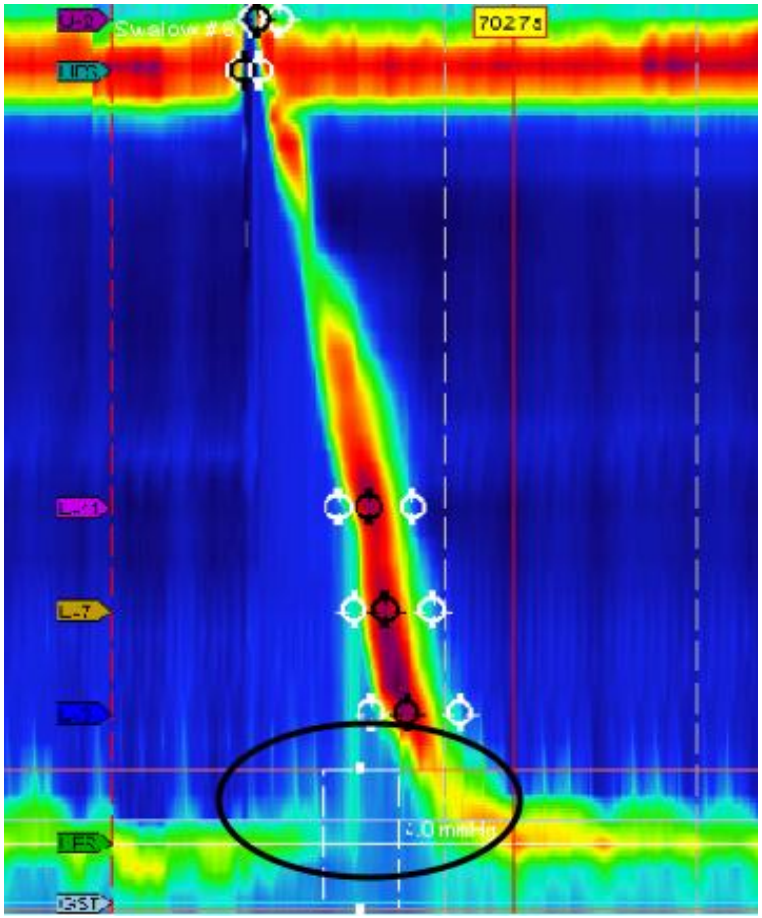
Achalasie

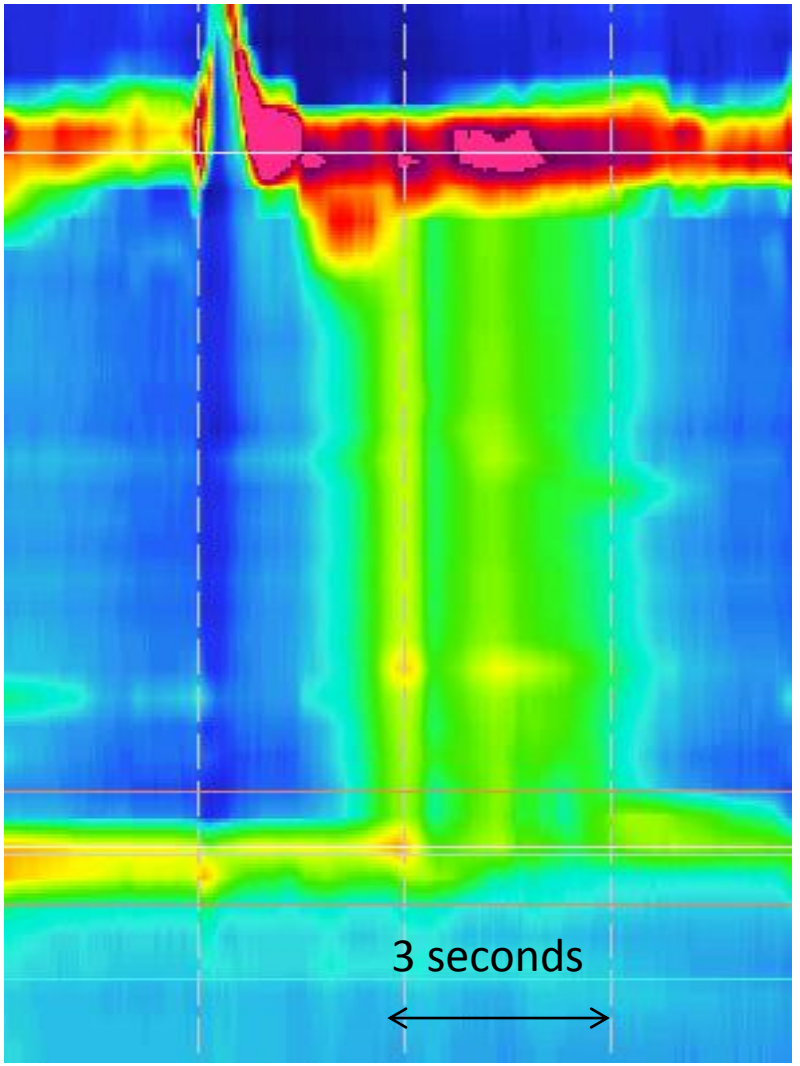
- Trouble moteur primitif de l'œsophage
- Prévalence 1-2/100.000 population
- Incidence 0,5/100.000/an
- Caractéristiques principales:
  - Apéristaltisme
  - Pression de repos du SIO élevée
  - Défaut de relaxation du SIO
- Physiopathologie incomplètement comprise.

Achalasie : aspects manométriques

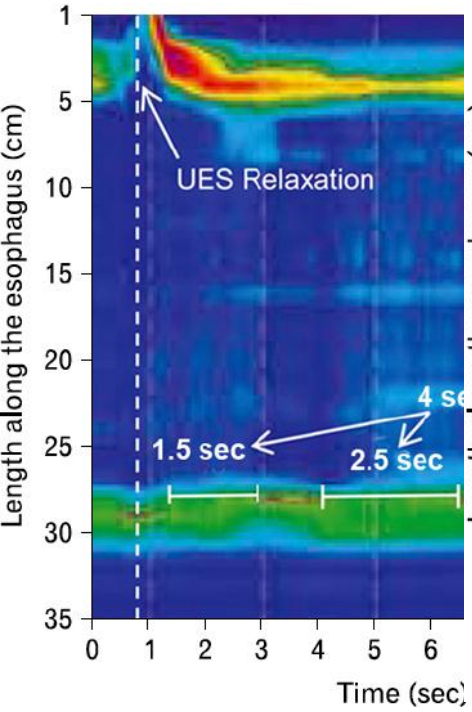


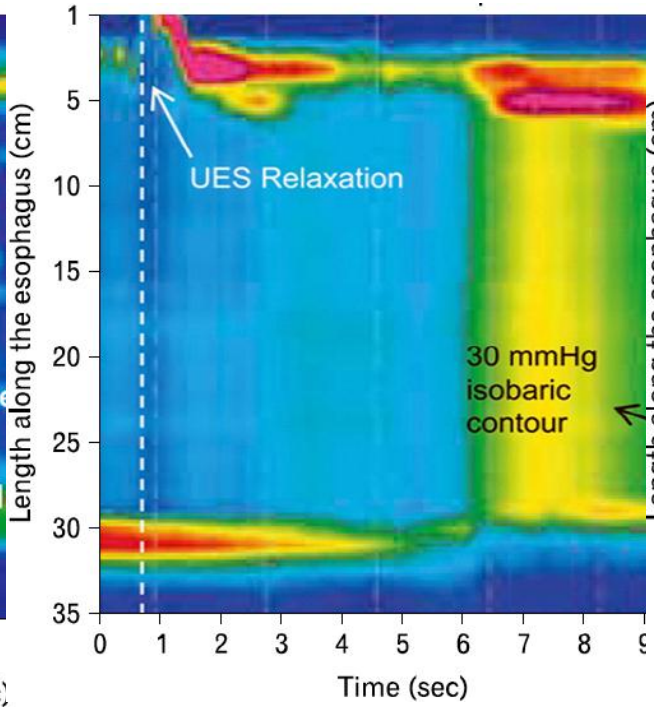
Achalasie : pathophysiologie (1)

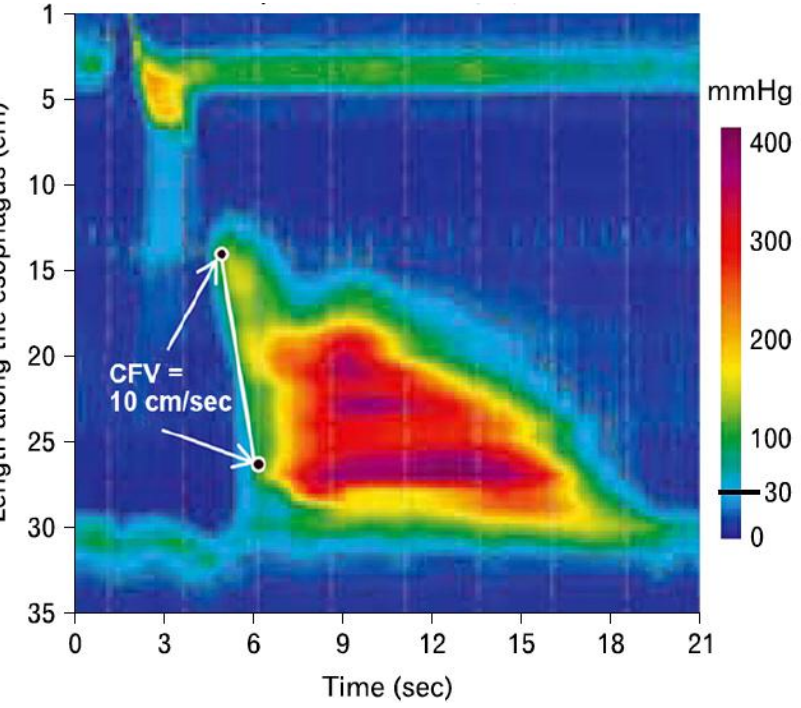




Achalasie : aspects manométriques





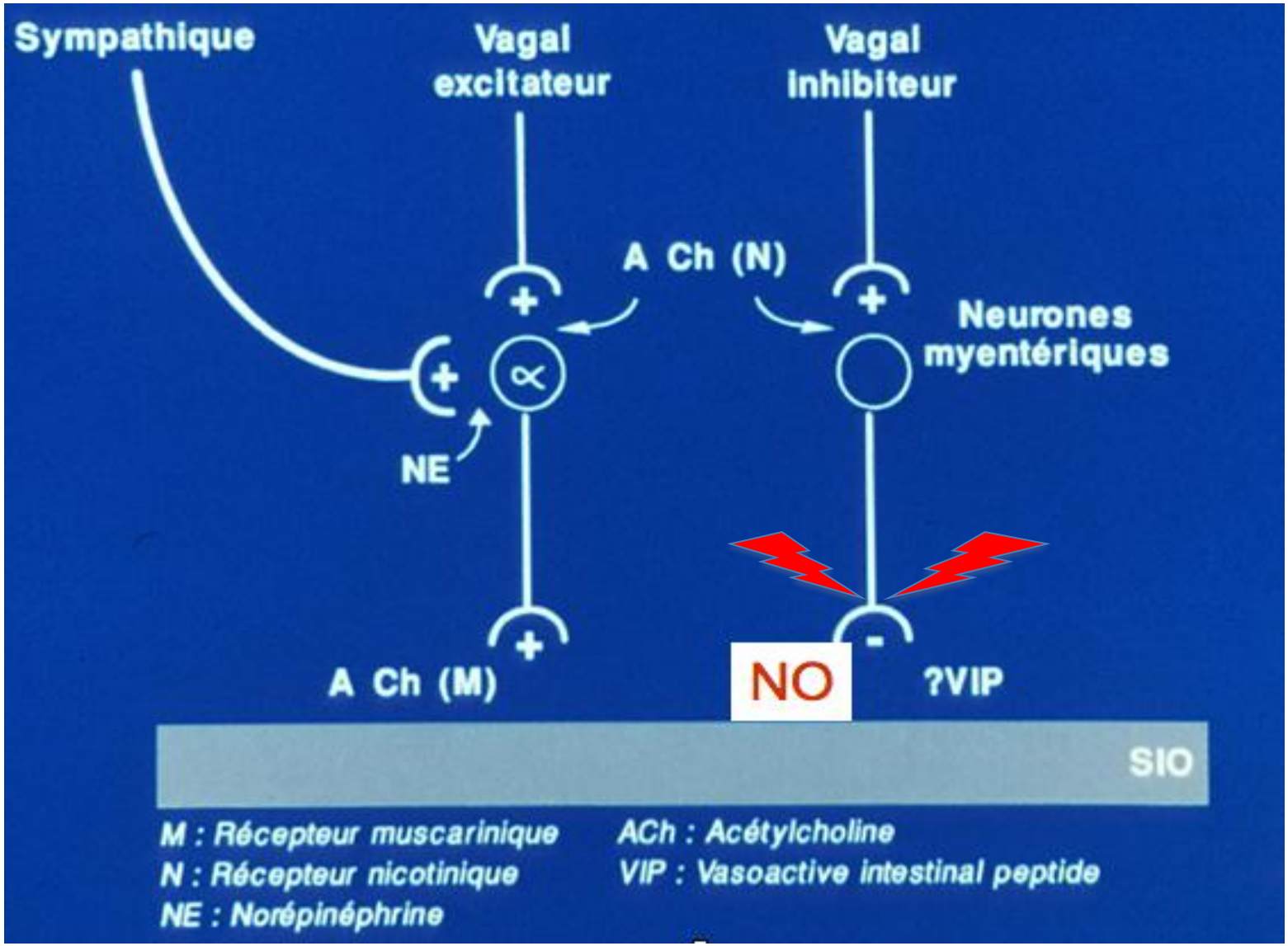


Type I
Classic achalasia

Type II
Achalasia with compression

Type III
Spastic achalasia

Achalasia : pathophysiology



Quand traiter ?
Bilan clinique: Score d'Eckardt

Weight loss	Dysphagia	Thoracic pain	Regurgitation	
non	non	non	non	**0**
<5Kg	occasionnelle	occasionnelle	occasionnelle	**1**
5-10Kg	quotidienne	quotidienne	quotidienne	**2**
>10Kg	chaque repas	chaque repas	chaque repas	**3**

Stade 0 scores 0 -1
Stade 1 scores 2 - 3
Stade 2 scores 4 -5- 6
Stade 3 scores > 6

>3 ⟹ traitement

Achalasie : objectifs du traitement

1. Contrôler les symptômes,
2. Améliorer la vidange œsophagienne
3. Prévenir le développement du mégaœsophage.

Achalasie : Approches thérapeutiques

1. Traitements pharmacologiques
2. Traitements endoscopiques
3. Traitement chirurgical
4. Etudes comparatives - Algoritmes
5. Perspectives

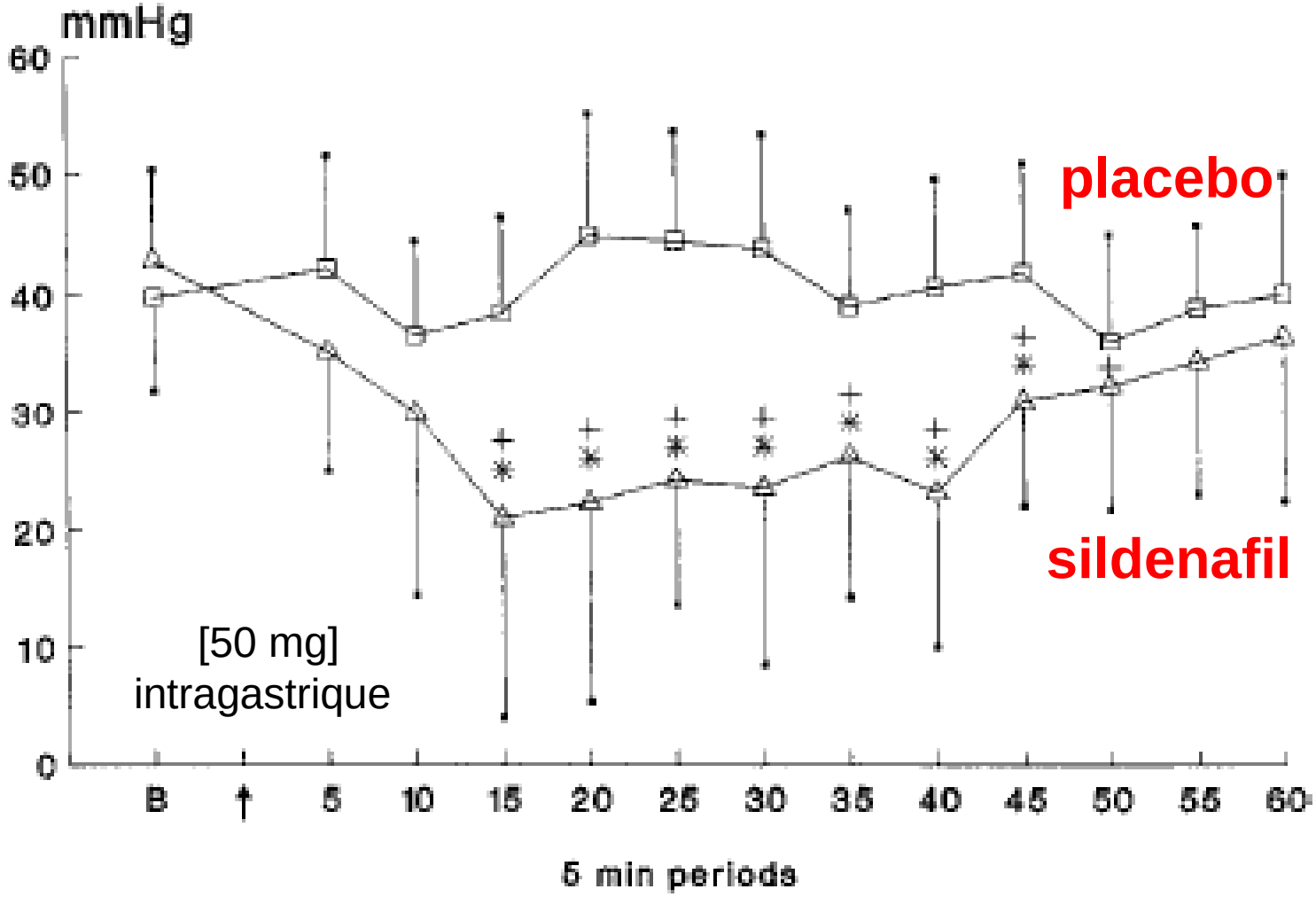
Traitements pharmacologiques

- Dérivés Nitrés
- Bloqueurs des canaux calciques
- Inhibitors phosphodiesterase-5

Effets idésirables
Efficacité modeste

Diagnostic initial
Formes de début
Stratégie temporaire d’attente

Sildenafil et pression du SIO dans l'achalasie

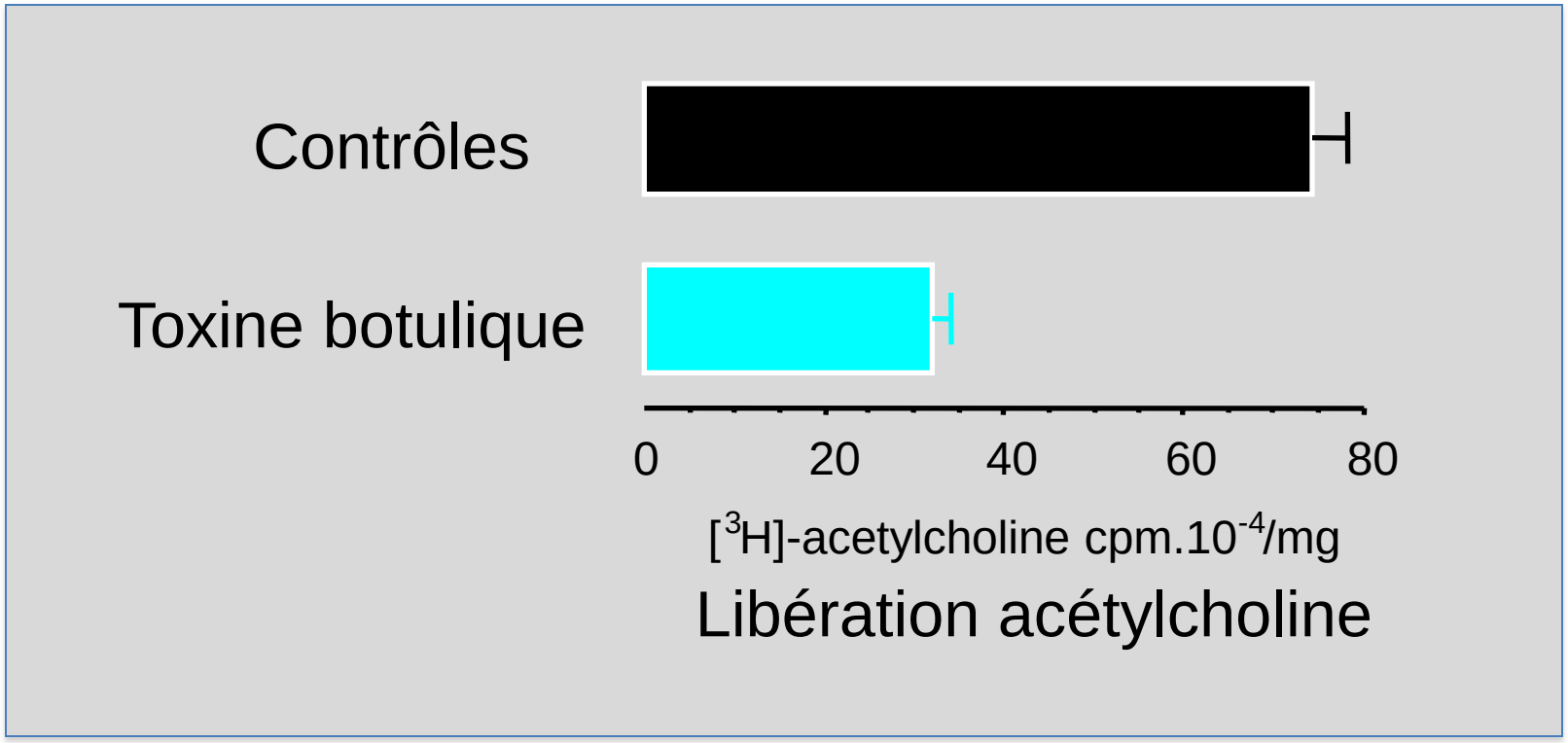


Bortolotti et al. Gastroenterology 2000;118:253-7
Eherer et al. Gut 2002;50:758-64

Traitements endoscopiques

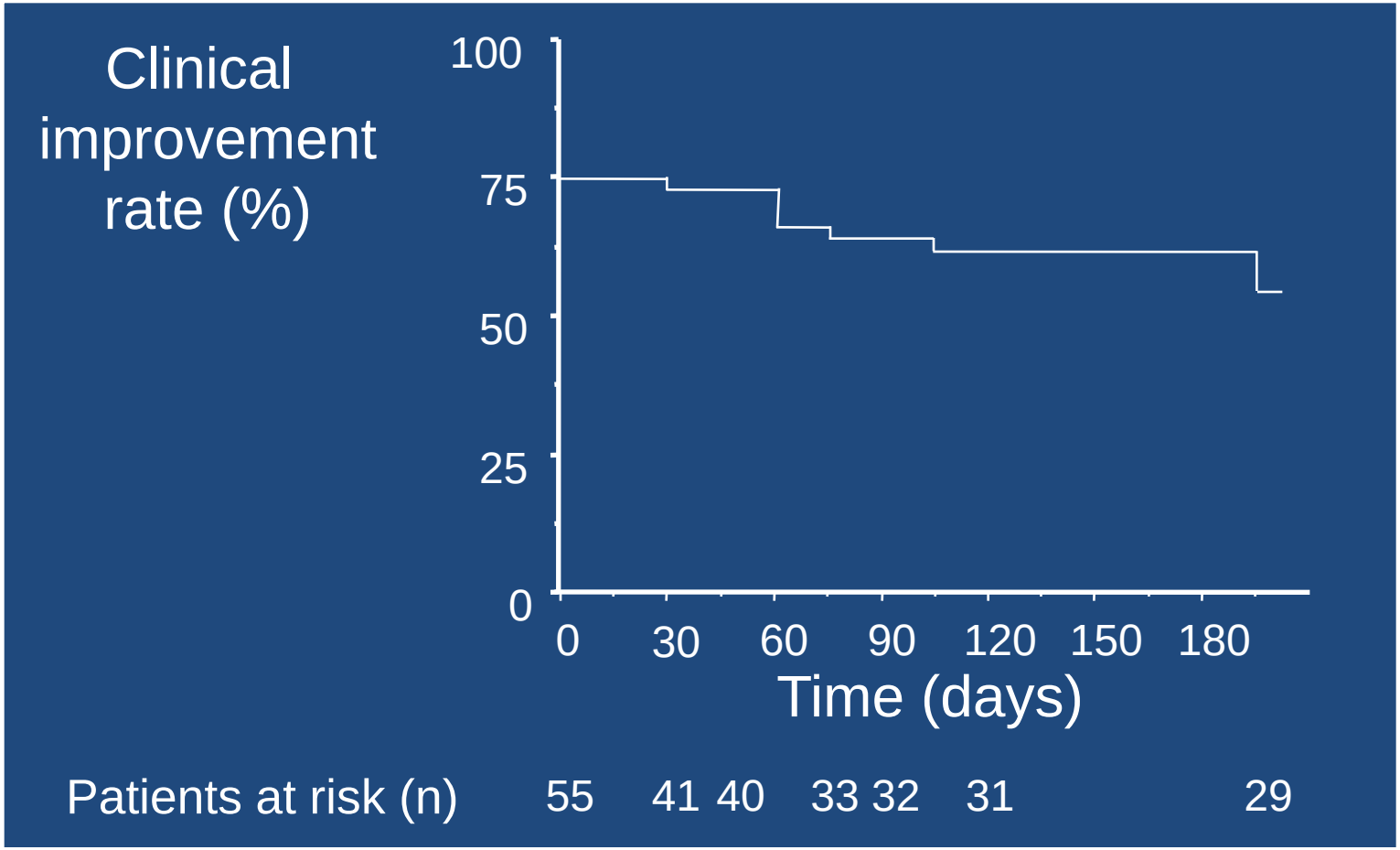
- Toxine Botulique
- Dilatation Pneumatique

Toxine botulique bloque la libération d'acétylcholine



Bigalke and Habermann 1980

Rémission après une injection unique



Cuillère et al., Gut 1997;41:87-92

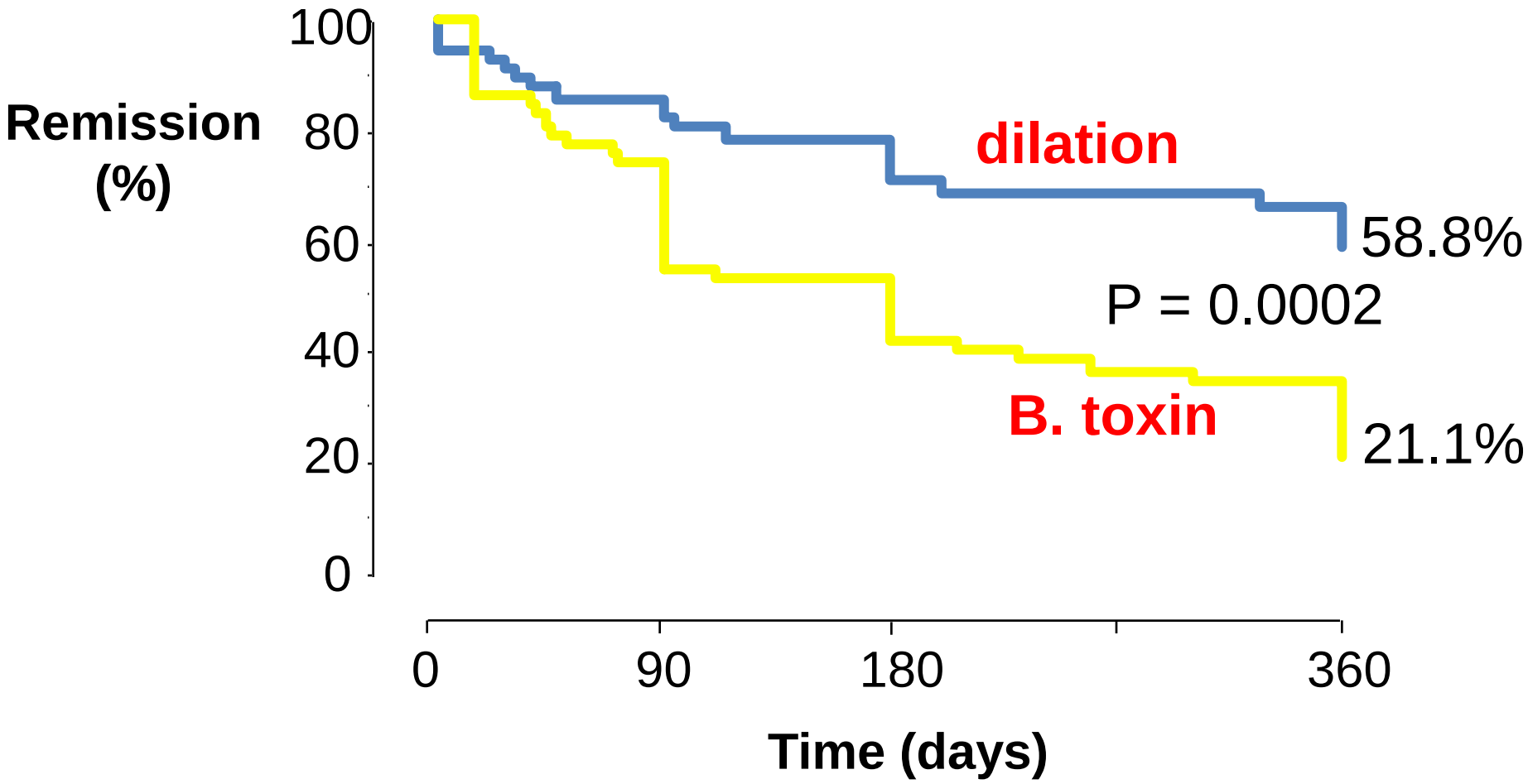
Botulinum Toxin vs Pneumatic Dilation

116 patients

Dilation		**B. Toxin**
57	Intention-To-Treat Analysis	59
6	Lost to follow-up	1
6	Additional treatment denied	9
1	Technical problem	1
1	Side effects	3
4	**Early Failure ($p < 0.01$)**	**15**

Bruley des Varannes et al. Gastroenterology 1999;116:A129

Botulinum Toxin vs Pneumatic Dilation
One-year Remission Rate (ITT Analysis)



Bruley des Varannes et al. Gastroenterology 1999;116:A129

Factors Predictive of Therapeutic Response

Univariate analysis		P
Treatment		0.0003
Age		0.033
Symptom score		0.0004

Multivariate analysis : Cox model		
Treatment	OR : 5.4 - 95-CI [2.3 - 12.6]	0.0001
Symptom score	OR : 1.4 - 95-CI [1.1 - 1.8]	0.0015

Bruley des Varannes et al. Gastroenterology 1999;116:A129

Toxine Botulique

Résultats et facteurs prédictifs de succès thérapeutique

Baisse de l'efficacité à long terme

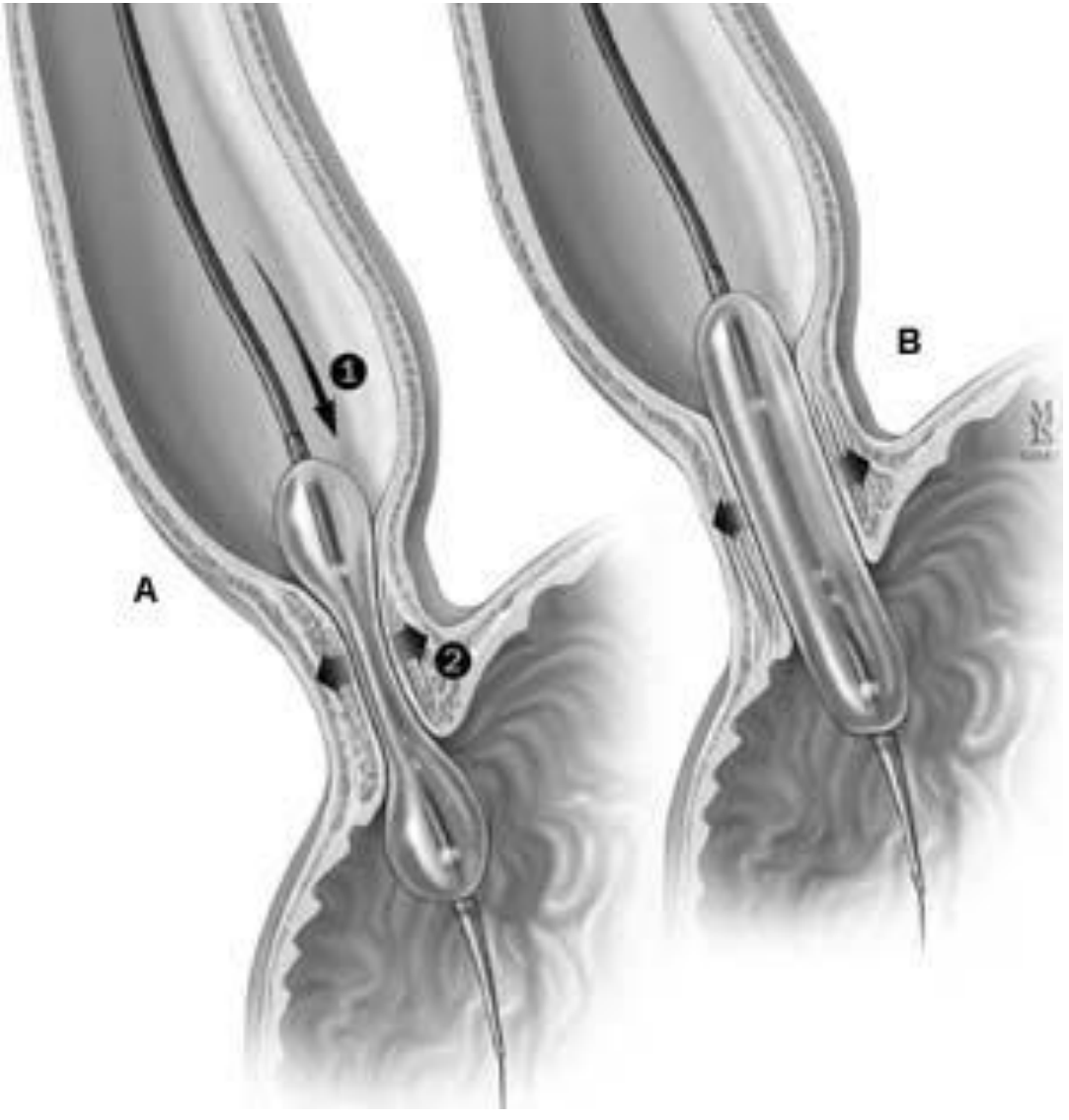
Taux de récidive > 50% à 1 an

Moins bonnes réponses aux injections successives

- **Achalasie vigoureuse***
- **Patients âgés***
- **Pression du SIO ne dépasse pas** 50% de la limite supérieure.

* Réponse soutenue plus fréquente

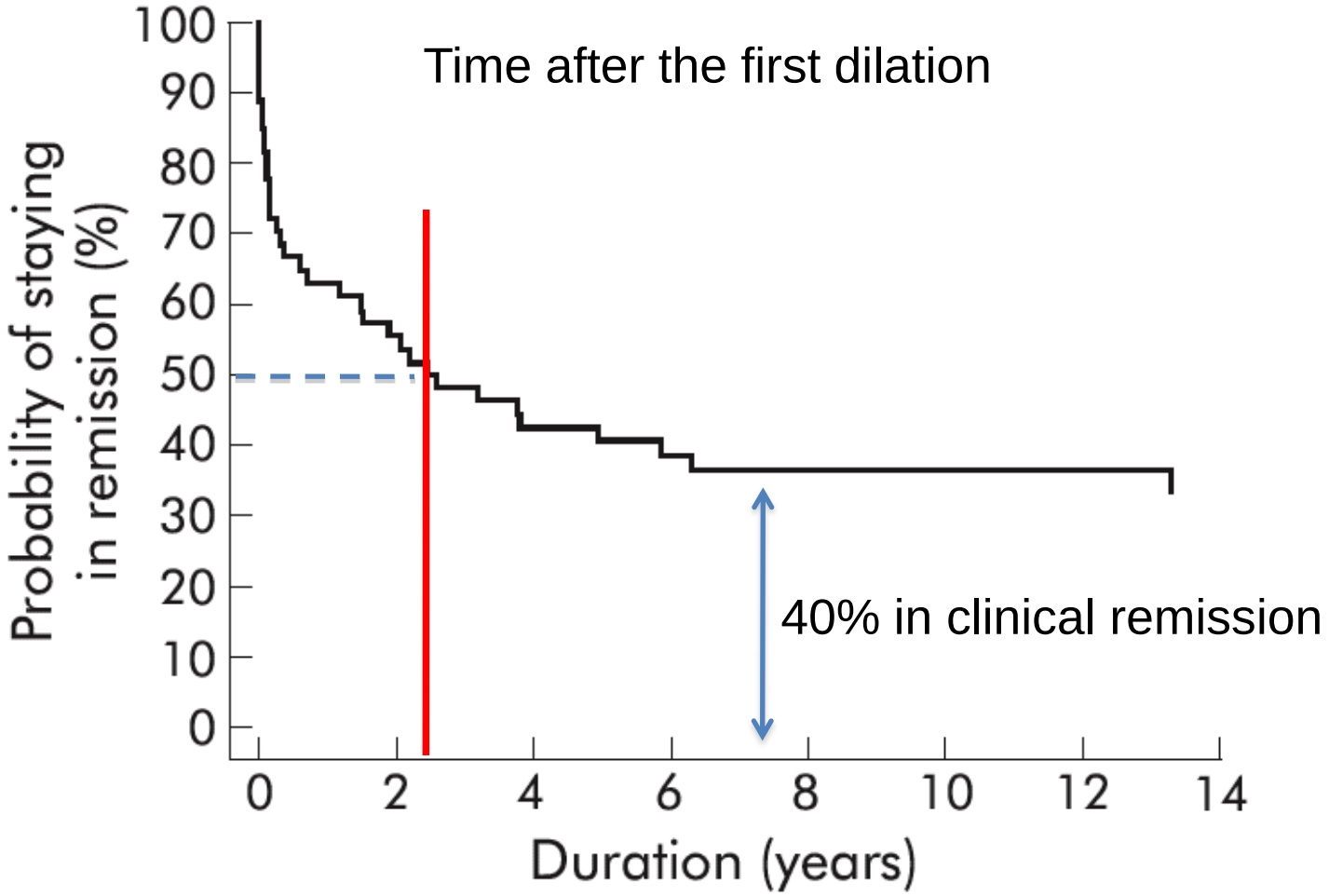
Achalasie : Dilatation pneumatique



Dilatations pneumatiques procédure

- Système Rigiflex
- Dilatations graduelles 30, 35, 40 mm
- Pression 6 – 15 psi (300 – 750 mm Hg) sur 15-60 s
- En hôpital de jour
- Single *vs* serial progressive dilations
- Approches itératives basées sur :
  - Réapparition des symptômes
  - Pression du SIO (< 10 mm Hg)

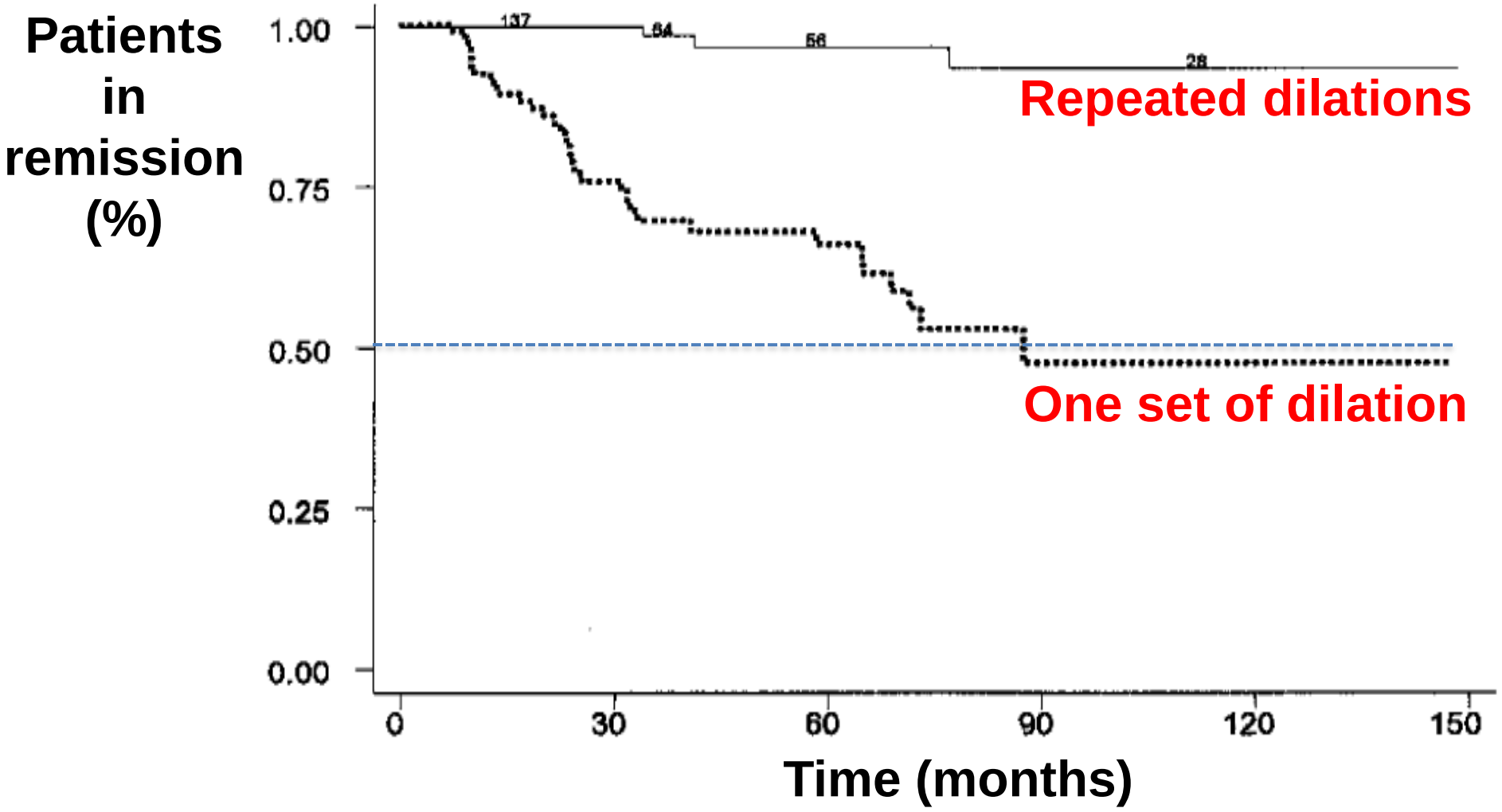
Patients remaininig in clinical remission at 5 years* have an excellent chance of requiring no further therapy for prolonged time



* Following a single dilation

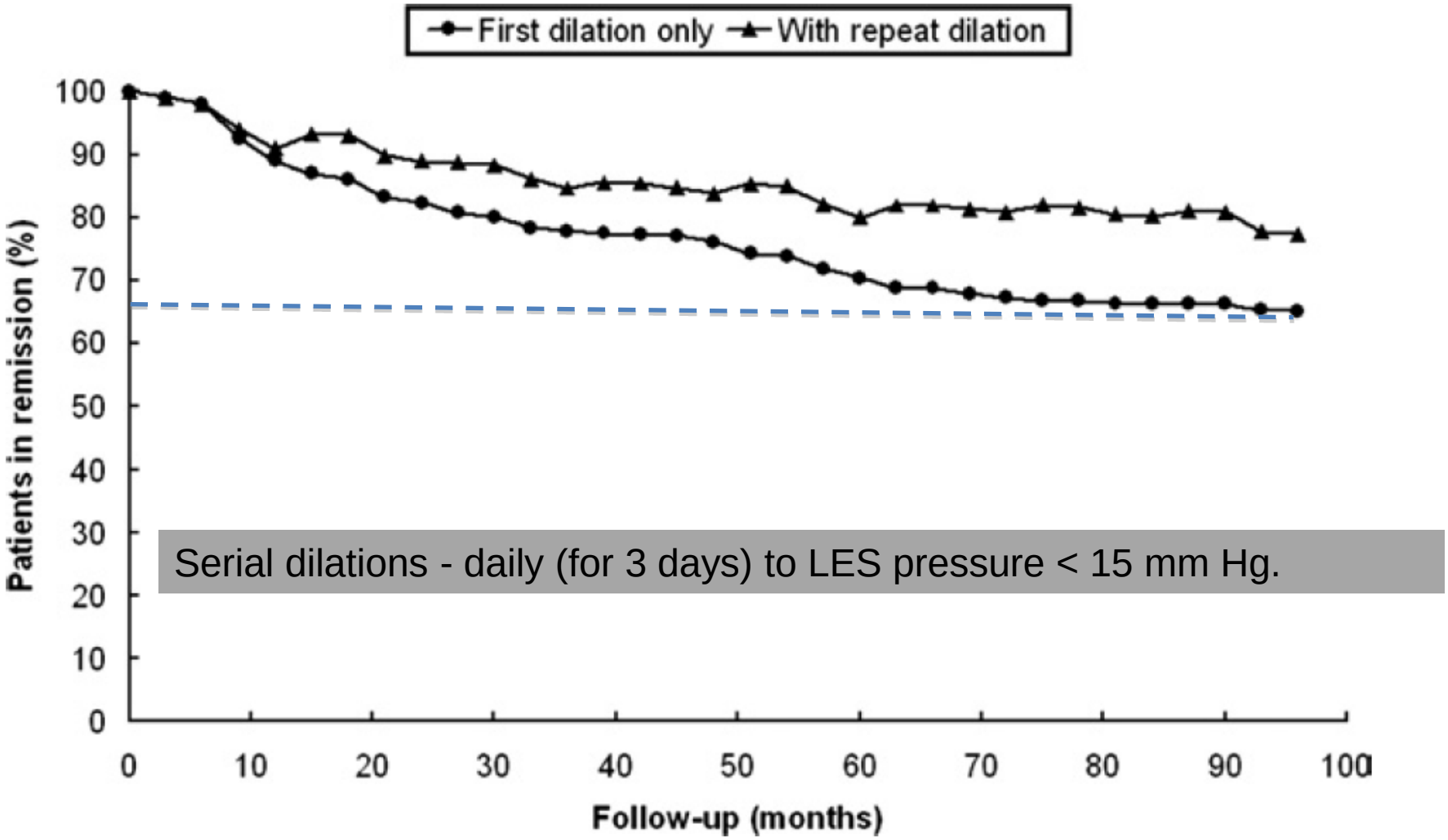
Eckardt F. et al. Gut 2004;53:629-633

Repeated dilation as long-term maintenance therapy in achalasia



Zerbib et al. Am J Gastroenterol 2006.

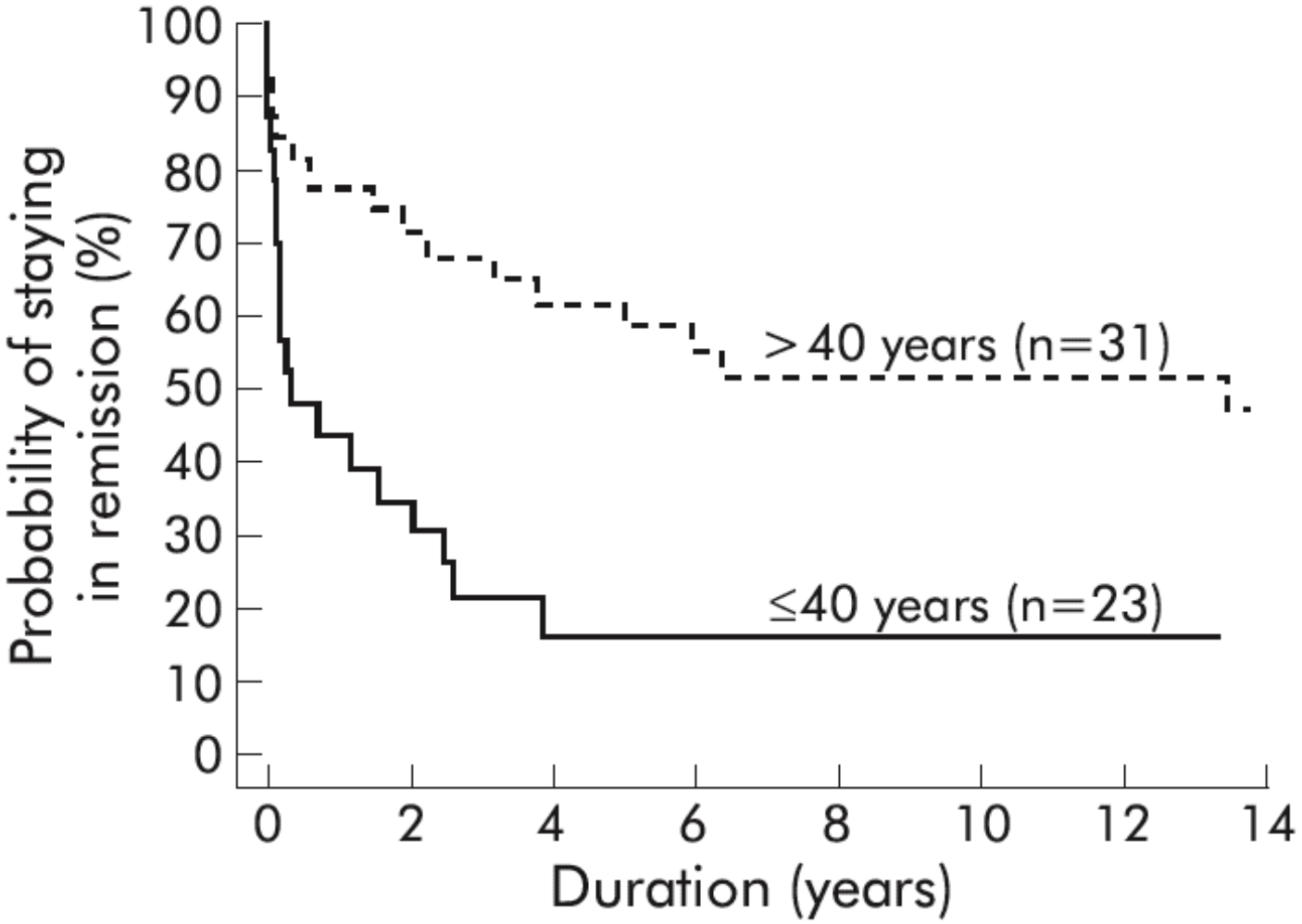
Need to standardize procedures



Serial dilations - daily (for 3 days) to LES pressure < 15 mm Hg.

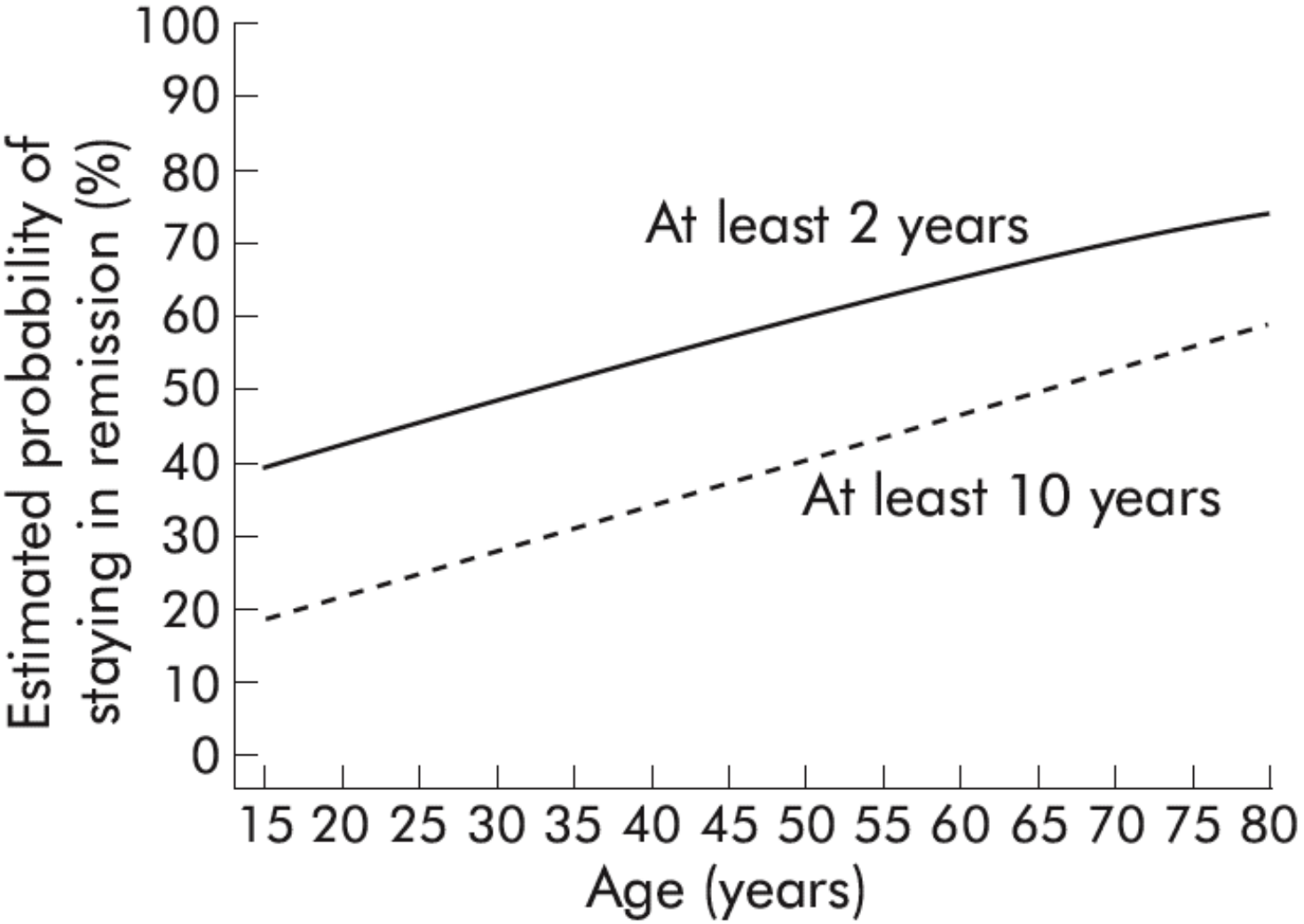
Huselmans et al. Clin Gastroenterol Hepatol 2010;8:30–5

Remission rate after a first dilation
Better response in patients > 40yrs



Eckardt F. et al. Gut 2004;53:629-633

Remission rate after a first dilation
Better response with increasing age



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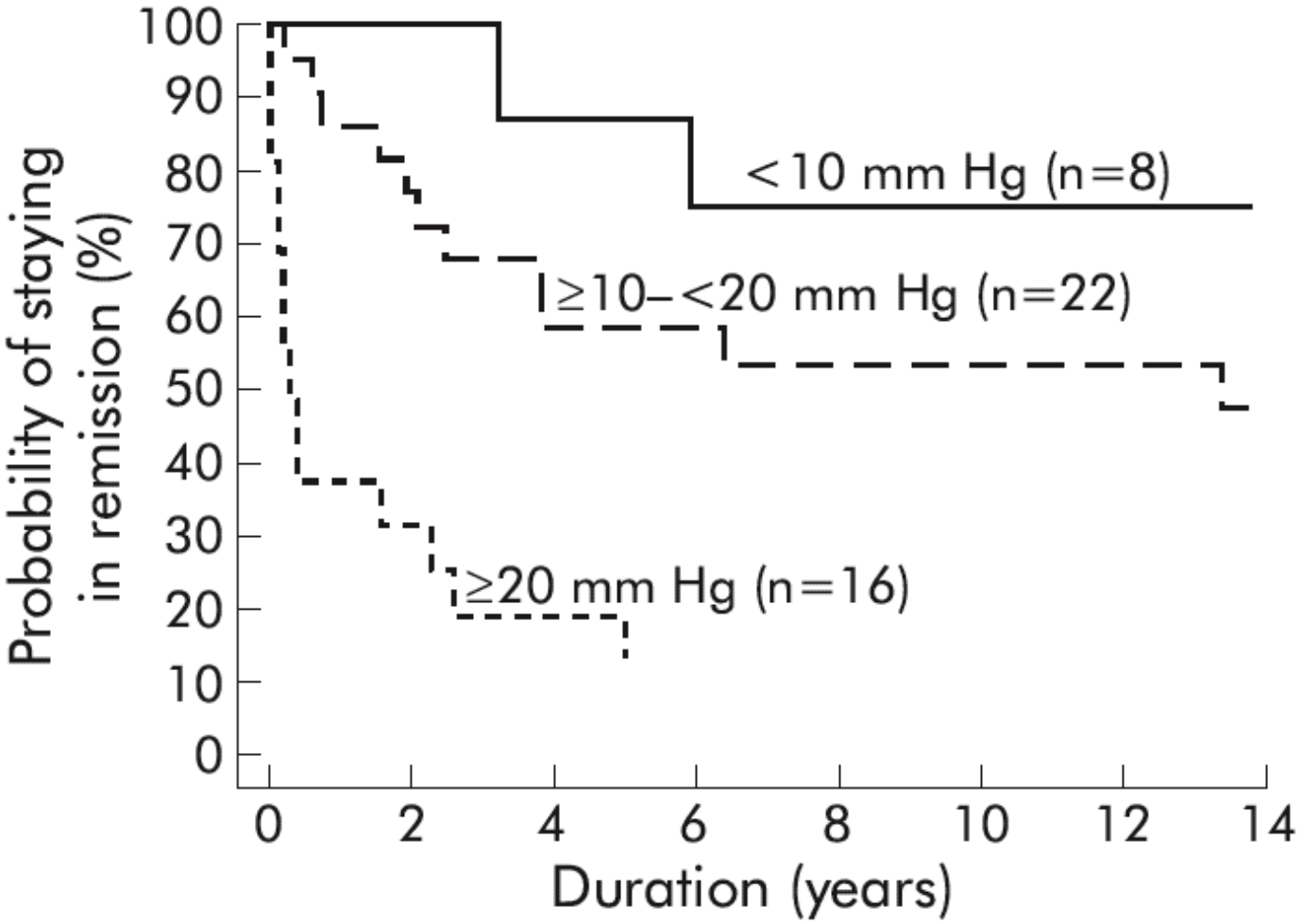
Post dilation LES pressure is a predictive factor of outcome



Eckardt F. et al. Gut 2004;53:629-633

Pneumatic dilations: summary (1)
Good - excellent outcome

50-93 %

Pooled results 1256 patients
20 months : **77%**

Efficacy decreases with longer follow-up

Roberts et al. In Evidence-based gastroenterology and Hepatology 3rd Ed. Feagan and Fennerty Blackwell Publishing Ltd 2010

Pneumatic dilations: summary (2)

Predictors of relapse

Related to patient

- Younger age
- Male gender
- Wide esophagus

Related to procedure

- Single dilation
- Small size balloon (< 30 mm)
- LES pressure > 10-15 mm Hg
- Poor esophageal emptying (baryum)

Related to manometry

- Type I and III on HR manometry

Richter. J Neurogastroenterol Motil 2010;16:232-42.

Pneumatic dilations: summary (3)

Complications

Related to natural course of the disease

- Pulmonary diseases
- Megaesophagus
- Carcinoma (RR x 50)

Related to procedure

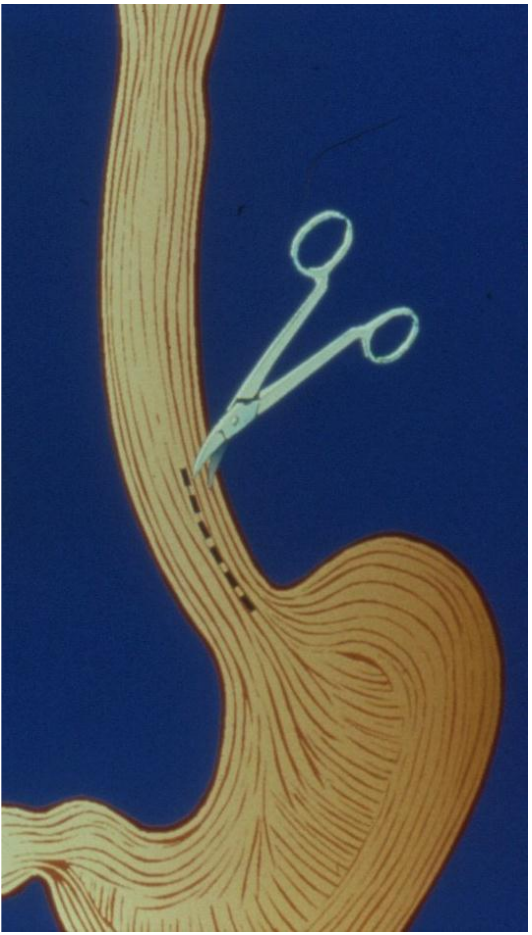
- Perforation (initial dilation)
- GERD – esophagitis

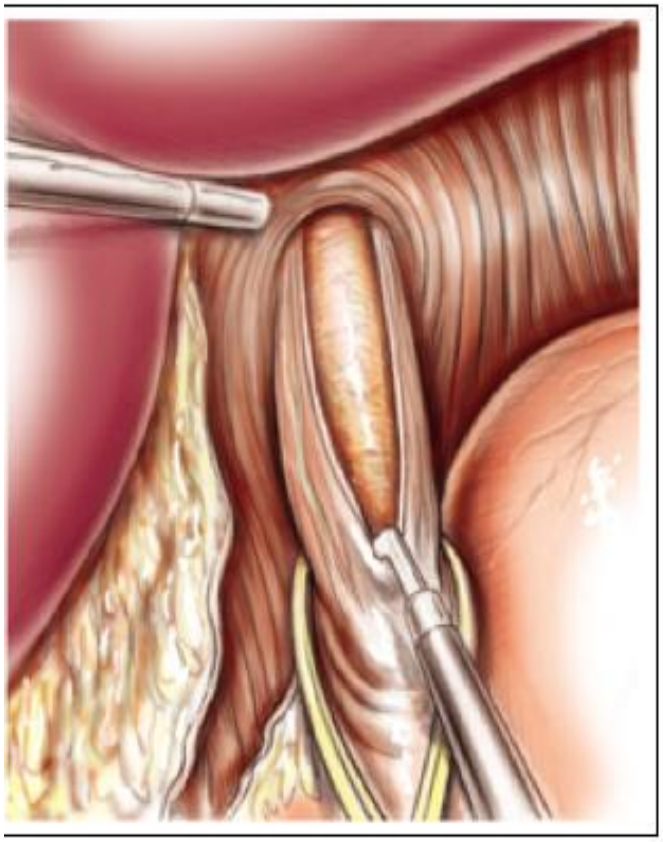
ASGE guideline

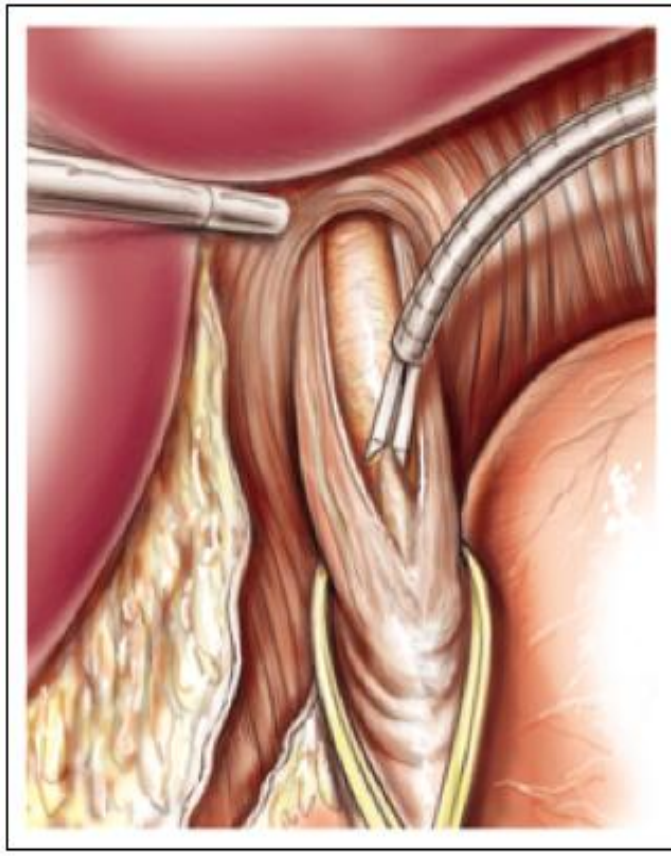
Surveillance for cancer after 15 yrs of symptoms

Patients with achalasia do not appear to experience a significant compromise of their overall life expectancy (Eckardt 2008).

Laparoscopic Hellers' myotomy







Laparoscopic myotomy with antireflux procedure

Good- excellent results
52-100 %*

Uncontrolled studies

Efficacy decreases with longer follow-up

HR manometric pattern III
LES resting pressure <30 mmHg
Previous pneumatic dilation
associated with negative outcome (Salvador et al 2010)

*Roberts et al. In Evidence-based gastroenterology and Hepatology 3rd Ed. Feagan and Fennerty Blackwell Publishing Ltd 2010

The key question ?
Should we dilate or operate on these patients ?

European Achalasia Trial

[G Boeckstaens et al]

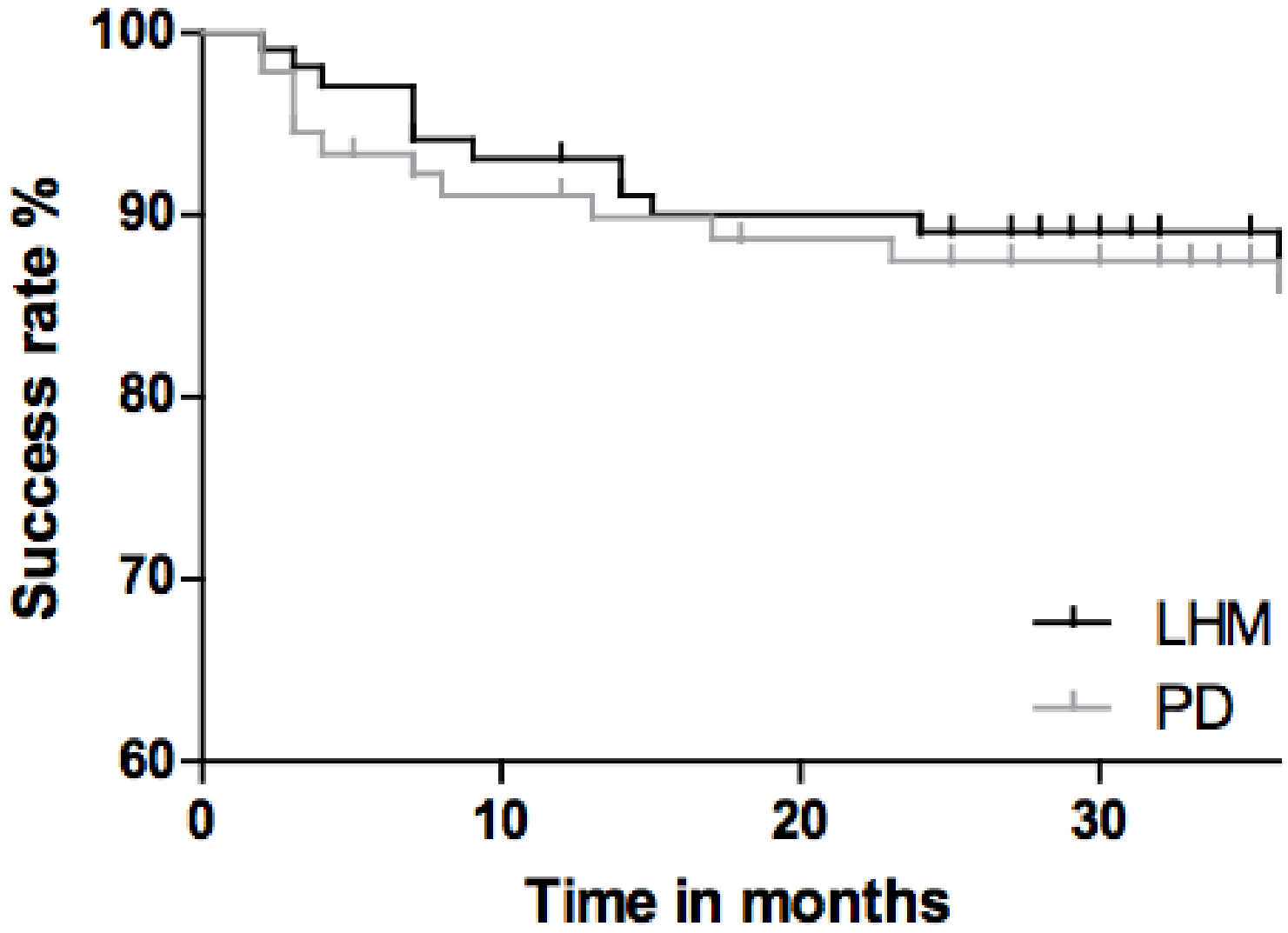
Patients included (n=218)

Randomized (n=214)

Lap. Heller Myotomy (n=106)		Pneumatic Dilation (n=108)
(n=97)	*Analysis 2 yrs*	(n=83)

Boeckxstaens et al. UEGW 2010

Pneumatic dilation or laparoscopic myotomy?



Boeckxstaens et al. DDW 2010

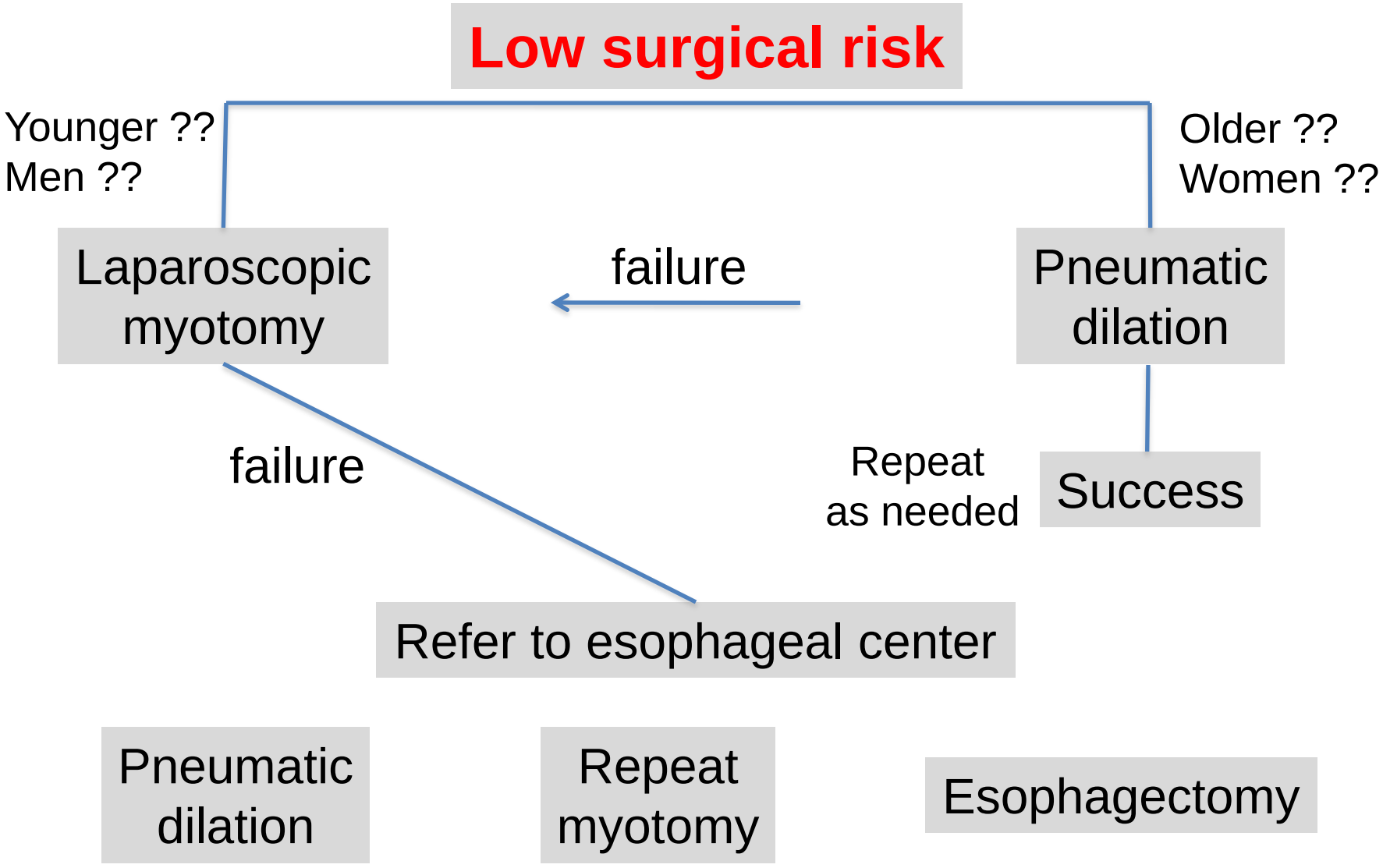
Pneumatic dilation or laparoscopic myotomy

Predictors of treatment failure

Pre-existing **daily chest pain**	HR 2.8 [1.1-7.1]
Height of the **baryum column 5 min**	HR 1.3 [1.1-1.5]
Esophageal width > 4 cm	HR 3.5 [1.3-9.9]

Boeckxstaens et al. DDW 2010

Achalasia : treatment



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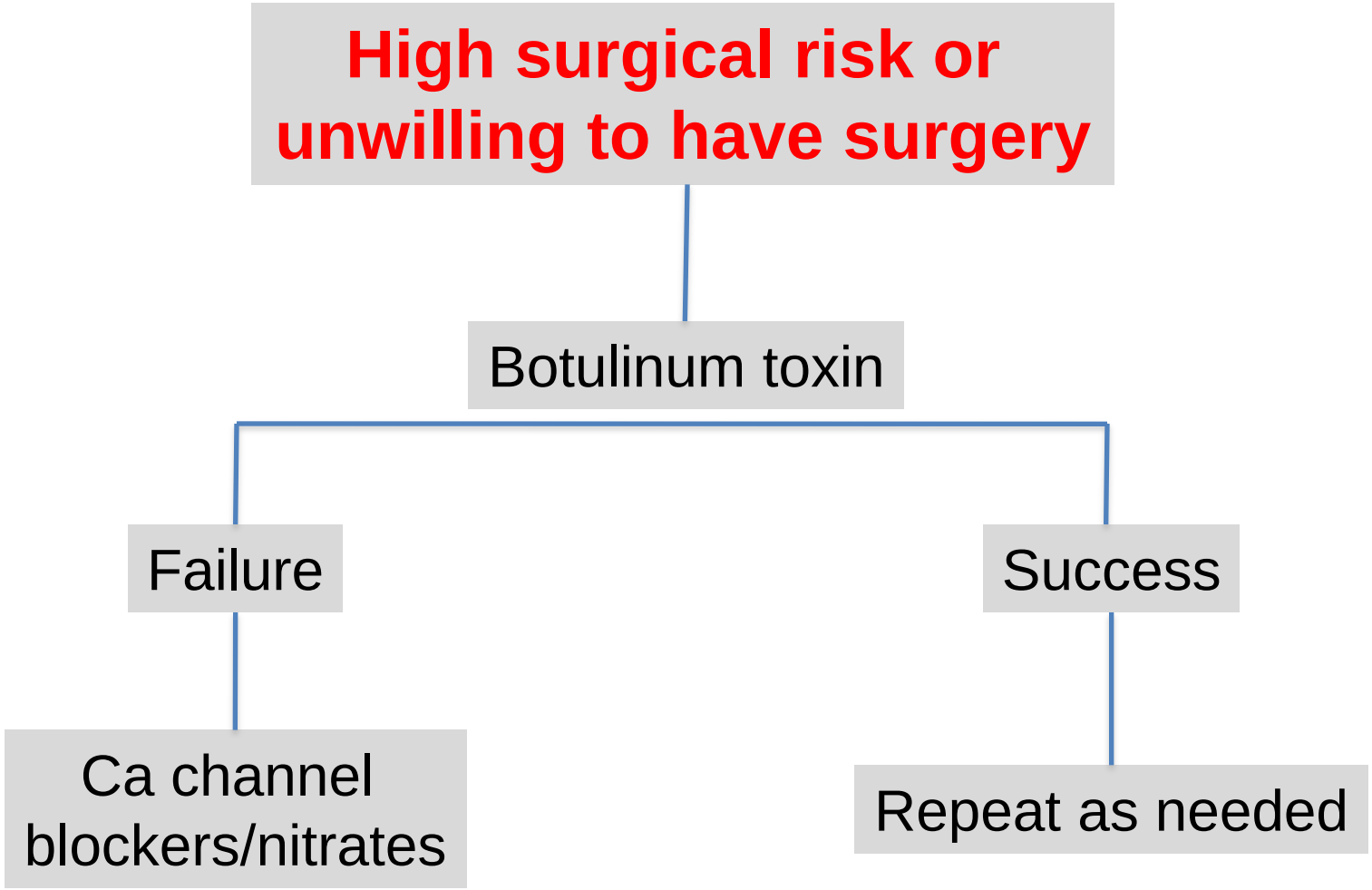
Achalasia : treatment



Choice based on experience of surgeon and endoscopist

Modifed from Richter. J Neurogastroenterol Motil 2010;16:232-42.

Achalasia
Future therapeutic approaches (1)

Per-Oral Endoscopic Myotomy[1]
Temporary stents[2]

[1]Inoue et al
[2]Zhu et al

Per-Oral Endoscopic Myotomy (POEM)

Creation of submucosal tunnel (gastric cardia)
Dissection of inner circular muscle bundle

Clinical study*

35 patients (some with sigmoïd esophagus)
No severe complication
Disappearance of dysphagia
LES pressure 55 to 22 mm Hg

*Minami et al UEGW 2010
Pasricha, P.J., et al. Endoscopy, 2007;39:761-4.
Inoue, H., et al. Endoscopy 2009;42:265-71.

Neurogastroenterol Motil (2010) **22**, 1240–e322 doi: 10.1111/j.1365-2982.2010.01573.x

Temporary self-expanding cardia stents for the treatment of achalasia: an experimental study in dogs

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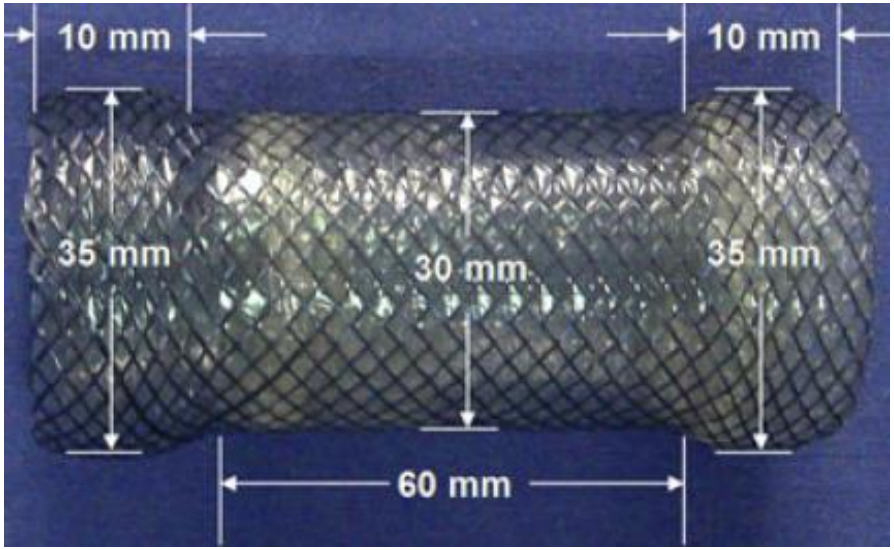

Achalasia
Future therapeutic approaches (2)

???

Early diagnosis
Immunosuppressive therapies
Cell stem transplantation[1]

???

[1]Micci et al

Merci