Troubles de la déglutition:

Qu'attendre des explorations pour le diagnostic et la prise en charge?

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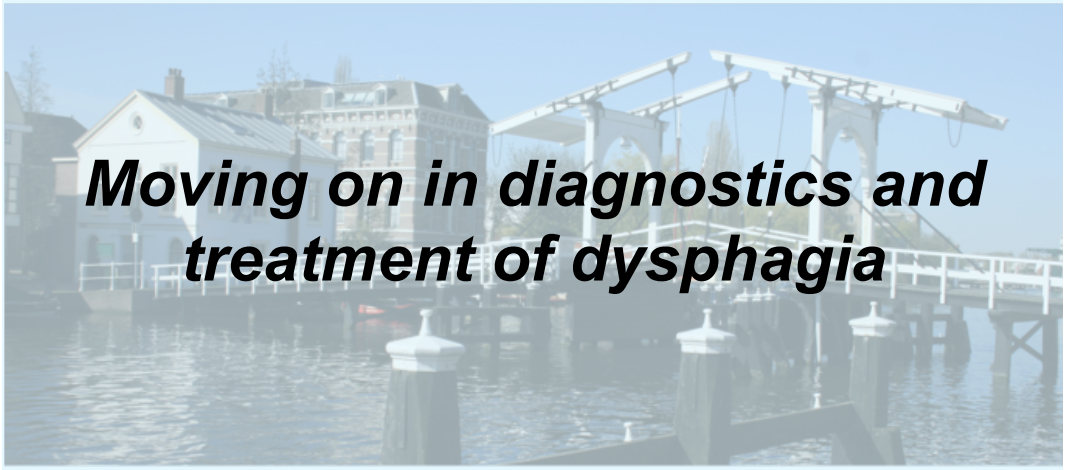
ESSD

1st Congress of the

European Society of Swallowing Disorders

(Formerly EGDG)



Moving on in diagnostics and treatment of dysphagia

September 9-10, 2011

Pre-Conference on September 8, 2011

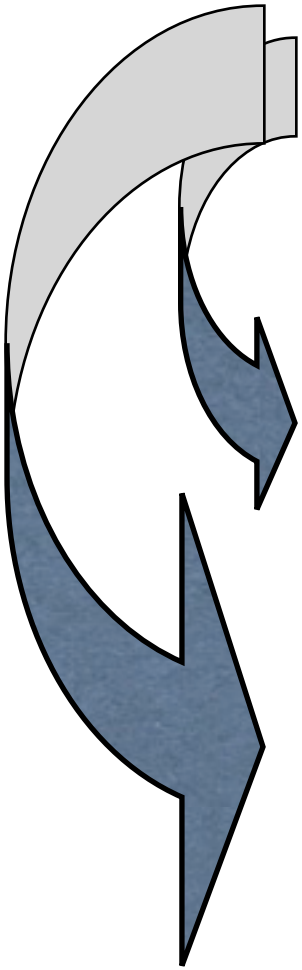
Leiden, The Netherlands
Holiday Inn Leiden

Organizing Committee:
Renée Speyer (Chair), Laura Baijens, Bas Heijnen

Deadline abstract submission: May 15, 2011
Early-bird registration date: May 29, 2011

Contact: INFO@ESSD2011.NL
WWW.ESSD2011.NL

Population générale de + de 50 ans : 16-20%



Patients hospitalisés: 12-13%

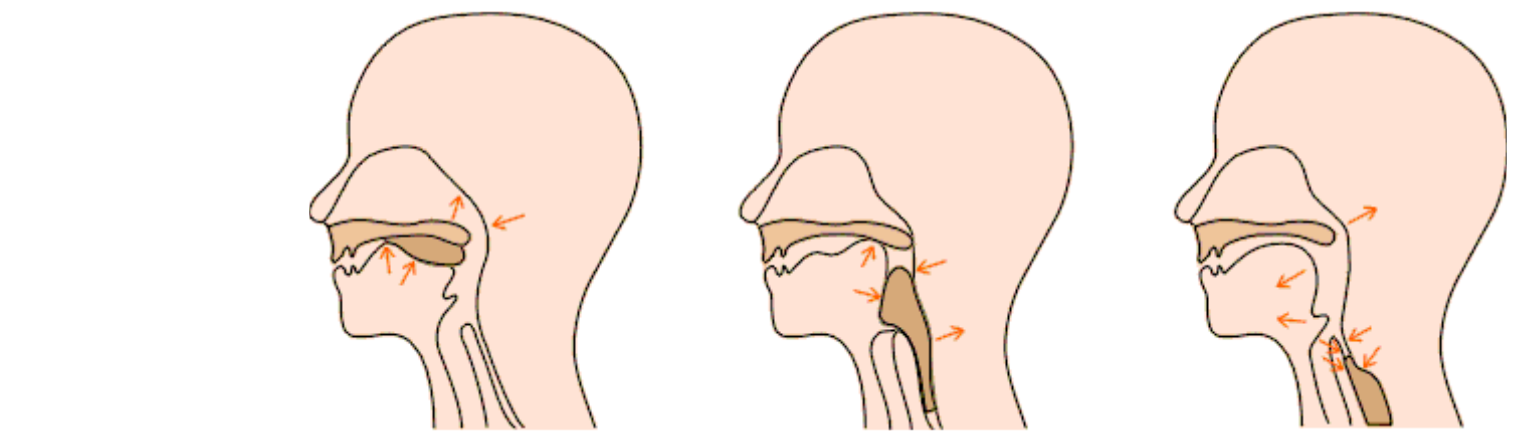
En dehors des étiologies ORL
Traumas cérébraux
Accidents vasculaires cérébraux
Maladie de Parkinson

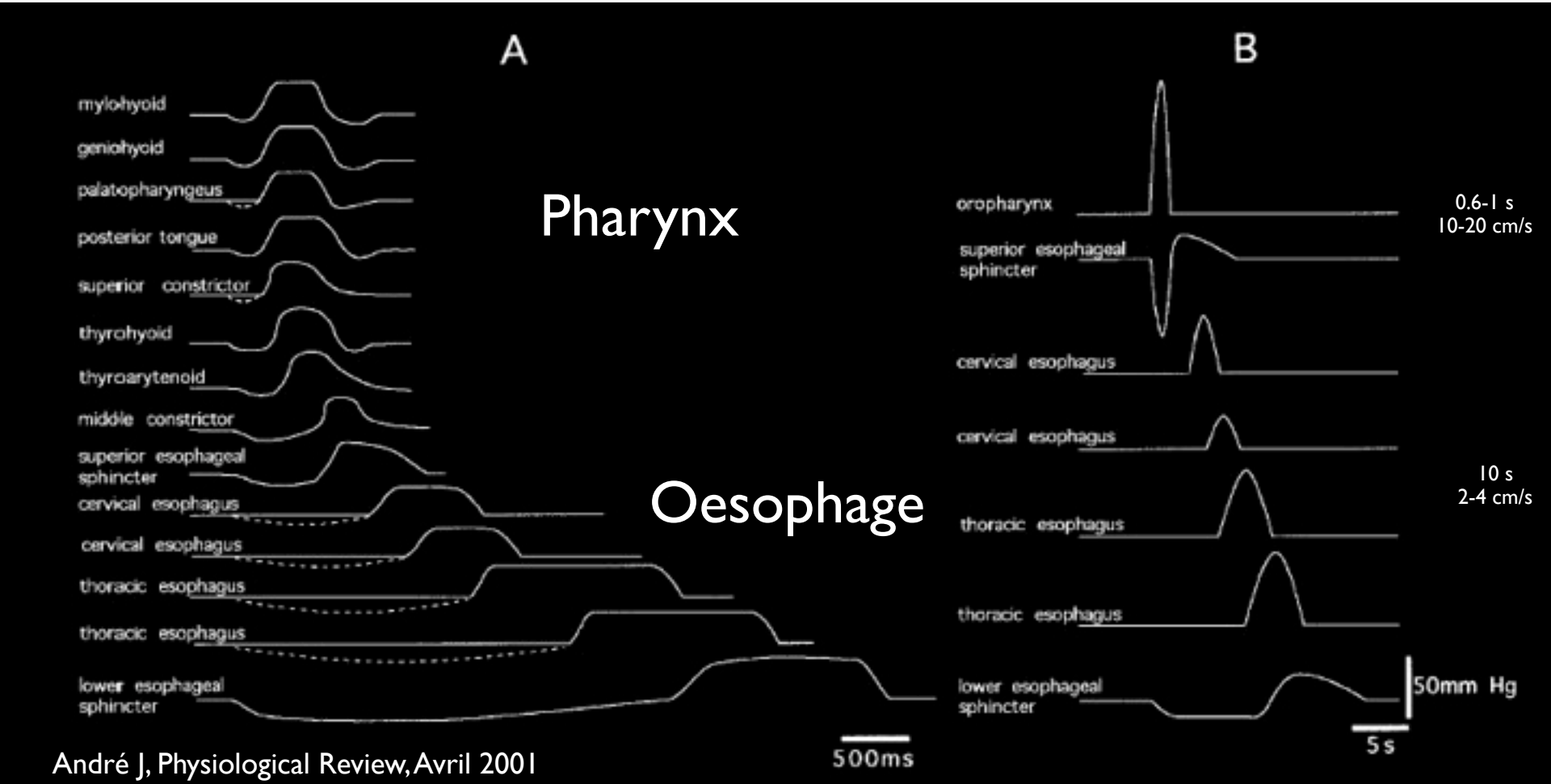
20-40%

Patients institutionnalisés: 40-50%

Institutionnalisation + Trouble de la déglutition + Fausses routes

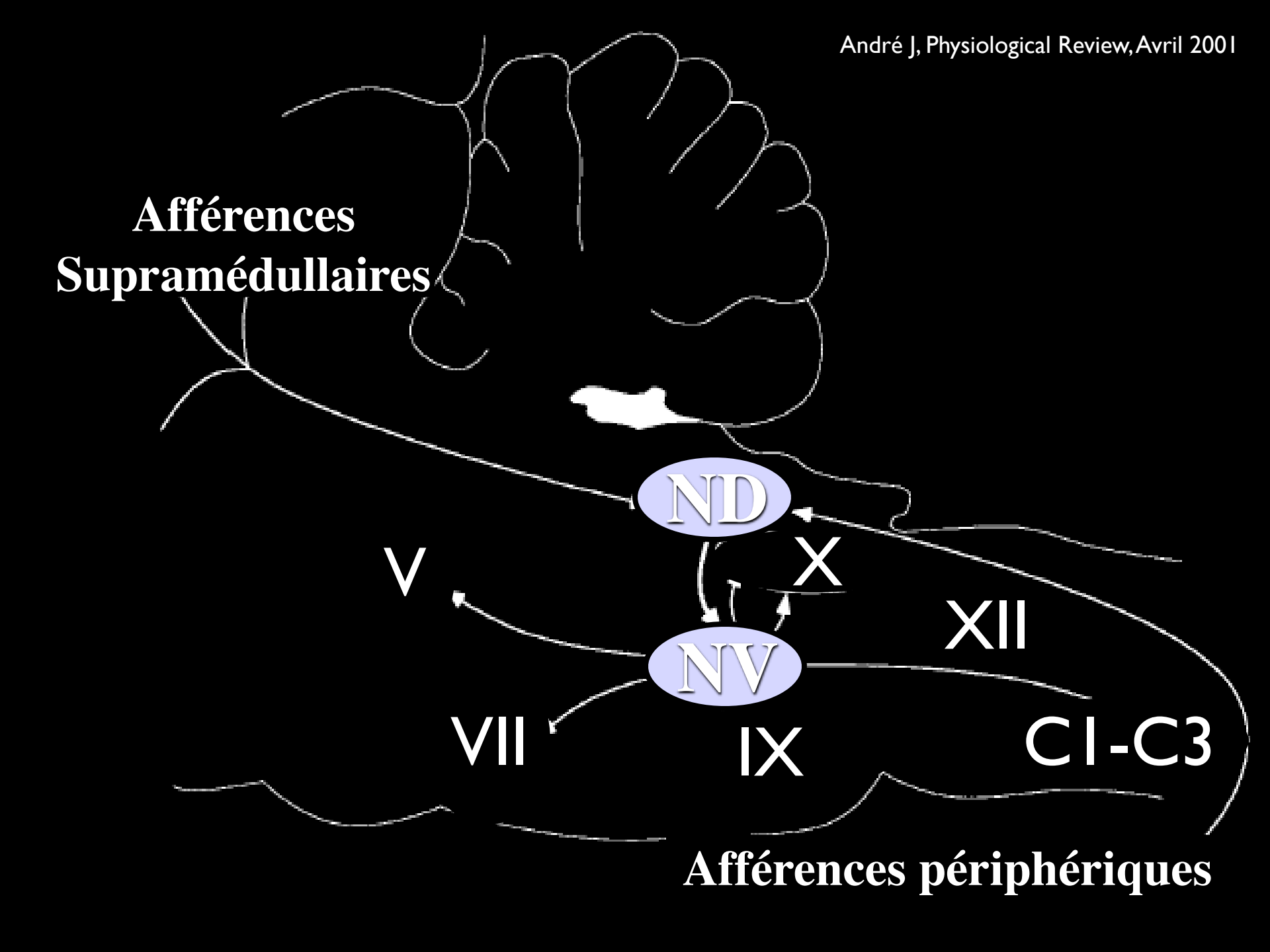
Mortalité à 12 mois de 45%





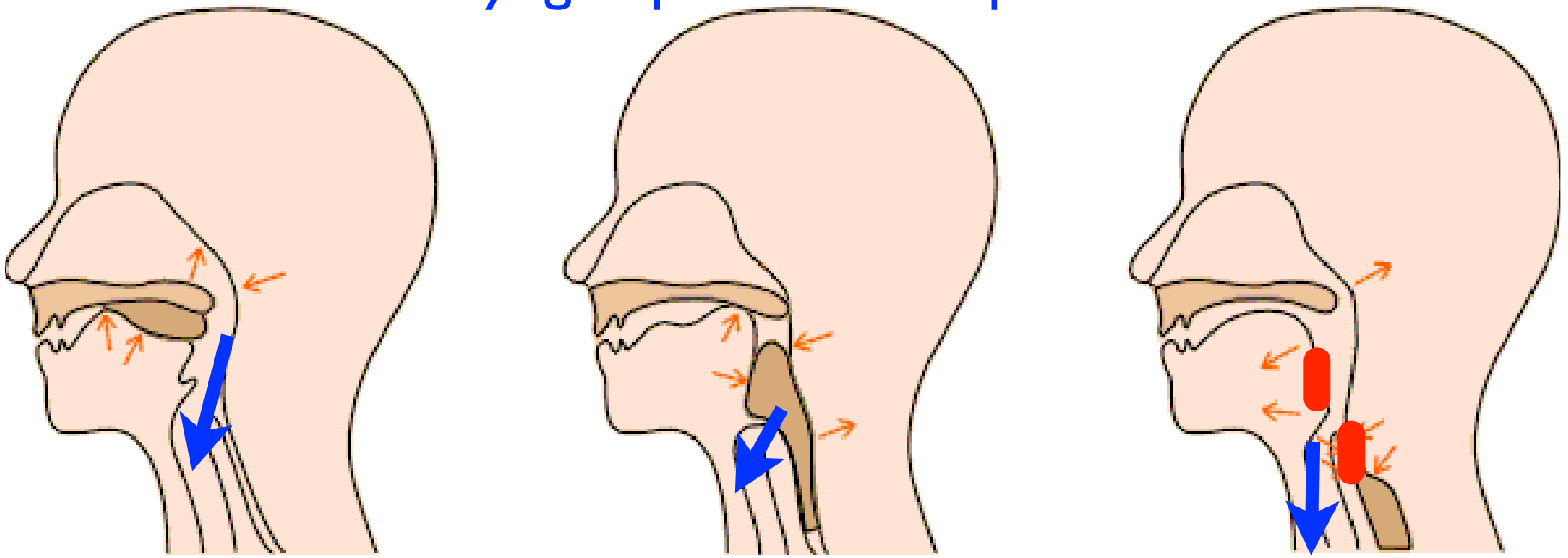
André J, Physiological Review, Avril 2001

André J, Physiological Review, Avril 2001



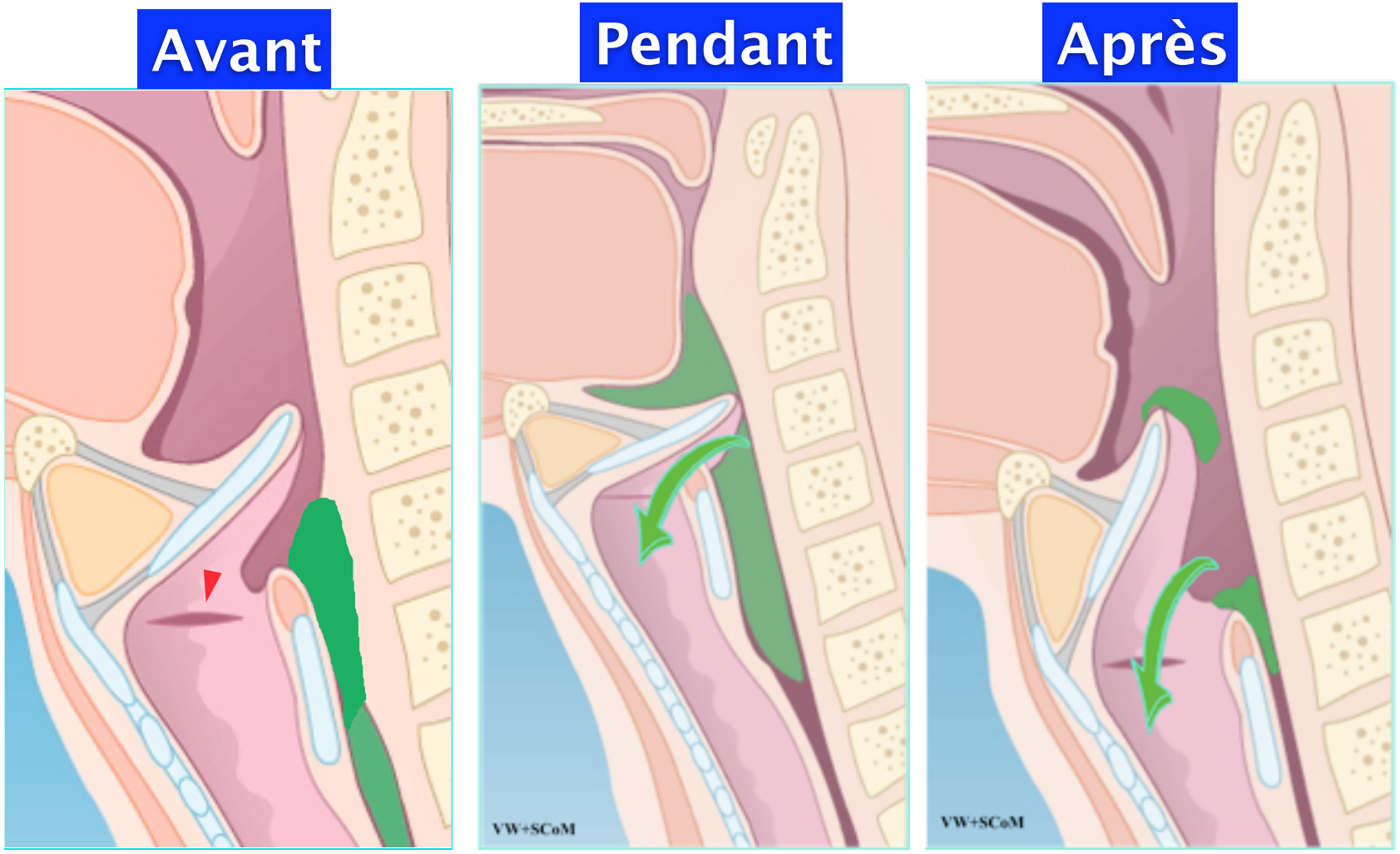
Trouble de la propulsion: résidu alimentaire pharyngé

Trouble de la protection (fausses routes): pénétration laryngée puis bronchique

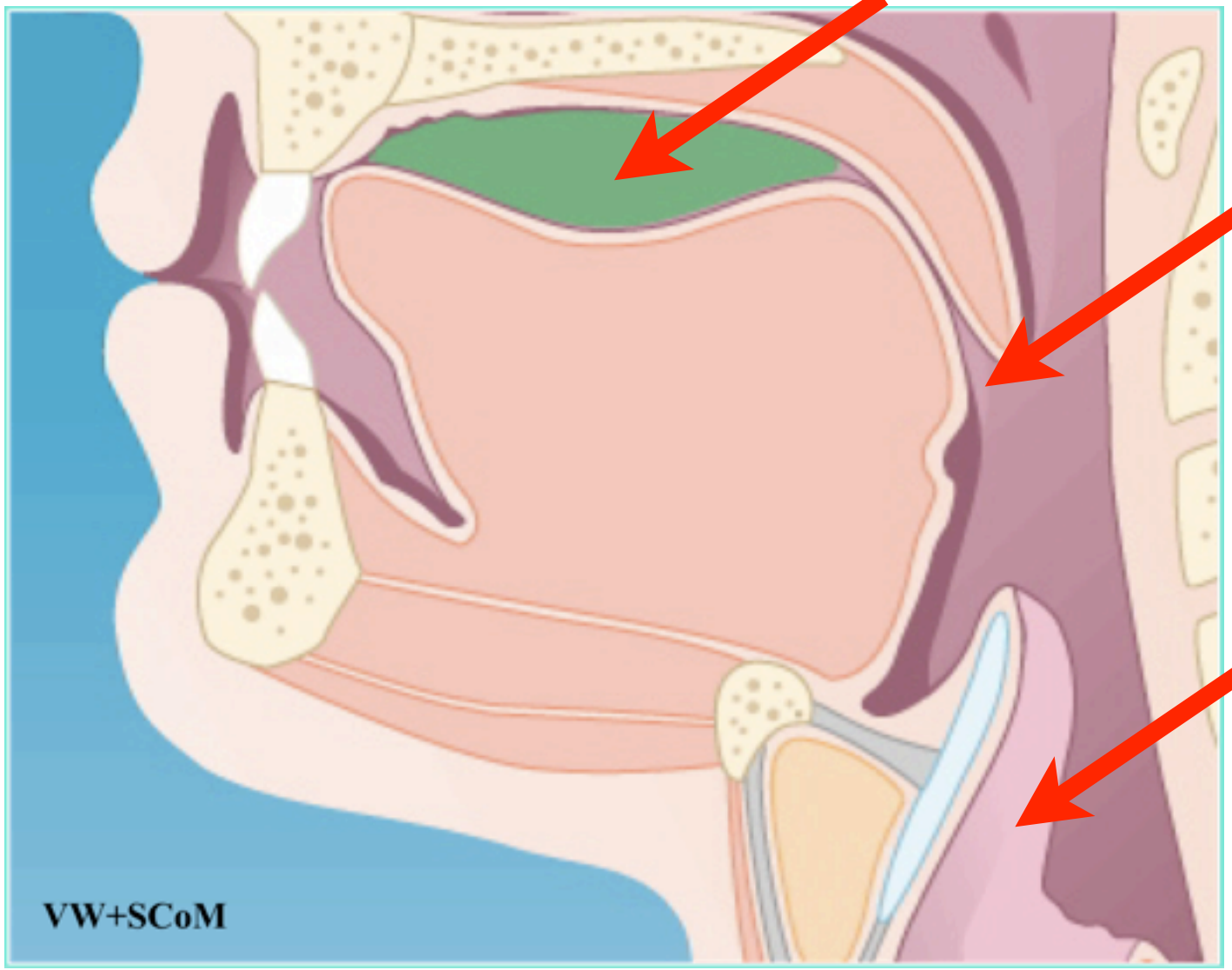


Complications respiratoires et nutritionnelles

Fausses routes laryngées / trachéales



DEFAUT DE TRANSPORT DES ALIMENTS



Les questions

Dysfonction sévère de la déglutition?

- Alimentation non orale?
- Trachéotomie?

Dysfonction peu sévère: la réadpatation est possible?

- Alimentation adaptée?
- Rééducation de la déglutition?

Les moyens

Examen clinique

Nasofibroscopie

Vidéofluoroscopie

Manométrie

Potentiels évoqués moteurs

L'EXAMEN CLINIQUE

Limité
Motricité / Sensibilité
Efficacité de la toux

Essais alimentaires au lit du malade ?

- Tests existants
  - Water swallow test (50 ml)
  - 3 oz water test (90 ml)
  - Timed swallow test (150 ml > 10 ml/s)
  - Oxymetrie
- Mais
  - ➡ Test dangereux si aspiration
  - ➡ AVC uniquement

GUSS test (Dysphagia Bedside Screening for Acute-Stroke Patients: The Gugging Swallowing Screen)

Name:_____
Date:_____
Time:_____

GUSS

(Gugging Swallowing Screen)

1. Preliminary Investigation /Indirect Swallowing Test

	YES	*NO*
Vigilance *(The patient must be alert for at least for 15 minutes)*	1 ☐	0 ☐
Cough and/or throat clearing *(voluntary cough)* *(Patient should cough or clear his or her throat twice)*	1 ☐	0 ☐
Saliva Swallow: • Swallowing successful	1 ☐	0 ☐
• Drooling	0 ☐	1 ☐
• Voice change (hoarse, gurgly, coated, weak)	0 ☐	1 ☐
SUM:	(5)	
	1 - 4= Investigate further[1] 5= Continue with part 2	

2. Direct Swallowing Test (Material: Aqua bi, flat teaspoon, food thickener, bread)

In the following order:	1 →	2 →	3 →
	SEMISOLID*	**LIQUID****	**SOLID *** **
DEGLUTITION:			
▪ Swallowing not possible	0 ☐	0 ☐	0 ☐
▪ Swallowing delayed (> 2 sec.) (Solid textures > 10 sec.)	1 ☐	1 ☐	1 ☐
▪ Swallowing successful	2 ☐	2 ☐	2 ☐
COUGH (involuntary): *(before, during or after swallowing – until 3 minutes later)*			
▪ Yes	0 ☐	0 ☐	0 ☐
▪ No	1 ☐	1 ☐	1 ☐
DROOLING:			
▪ Yes	0 ☐	0 ☐	0 ☐
▪ No	1 ☐	1 ☐	1 ☐
VOICE CHANGE: *(listen to the voice before and after swallowing - Patient should speak „O")*			
▪ Yes	0 ☐	0 ☐	0 ☐
▪ No	1 ☐	1 ☐	1 ☐
SUM:	(5)	(5)	(5)
	1 - 4= Investigate further¹ 5= Continue Liquid	1 - 4= Investigate further¹ 5= Continue Solid	1 - 4= Investigate further¹ 5= Normal

SUM: **(Indirect Swallowing Test AND Direct Swallowing Test)** _____ (20)

*	First administer ½ up to a half teaspoon Aqua bi with food thickener (pudding-like consistency). If there are no symptoms apply 3 to 5 teaspoons. Assess after the 5th spoonful.
**	3, 5, 10, 20 ml Aqua bi - if there are no symptoms continue with 50 ml Aqua bi (Daniels et al. 2000; Gottlieb et al. 1996) Assess and stop the investigation when one of the criteria is observed!
***	Clinical: dry bread; FEES: dry bread which is dipped in coloured liquid
¹	Use functional investigations such as Videofluoroscopic Evaluation of Swallowing (VFES) , Fiberoptic Endoscopic Evalutation of Swallowing (FEES)

Trapl, M., et al., *Dysphagia bedside screening for acute-stroke patients: the Gugging Swallowing Screen.* Stroke, 2007. **38**(11): p. 2948-52.

Table. Sensitivity, Specificity, and Predictive Values of GUSS

	FEES, Highest Score		
	Aspiration Risk, PAS (5–8)	No Aspiration Risk, PAS (1–4)	
GUSS results, first group, n=19			
Aspiration risk (0–14)	13	3	PPV=81%
No aspiration risk (15–20)	0	3	NPV=100%
	Sensitivity=100%	Specificity=50%	Prevalence=68%
GUSS results, second group, n=30			
Aspiration risk (0–14)	14	5	PPV=74%
No aspiration risk (15–20)	0	11	NPV=100%
	Sensitivity=100%	Specificity=69%	Prevalence=10%

NPV indicates negative predictive value; PPV, positive predictive value. Sensitivity, specificity, and predictive values of GUSS in the first validation of stroke patients (n=19) were compared with "gold standard" FEES results. Aspiration risk was grouped according to the PAS of Rosenbek et al.[32]

GUSS

(Gugging Swallowing Screen)

GUSS-EVALUATION

RESULTS		SEVERITY CODE	RECOMMENDATIONS
20	Semisolid / liquid and solid texture successful	Slight / No Dysphagia minimal risk of aspiration	• Normal Diet • Regular Liquids (First time under supervision of the SLT or a trained stroke nurse!)
15-19	Semisolid and liquid texture successful and Solid unsuccessful	Slight Dysphagia with a low risk of aspiration	• Dysphagia Diet (pureed and soft food) • Liquids very slowly, one sip at a time • Funcional swallowing assessments such as Fiberoptic Endoscopic Evaluation of Swallowing (FEES) or Videofluoroscopic Evaluation of Swallowing (VFES) • Refer to Speech and Language Therapist (SLT)
10-14	Semisolid swallow success sful and Liquids unsuccessful	Moderate dysphagia with a risk of aspiration	Dysphagia diet beginning with : • Semisolid texture such as baby food and additional parenteral feeding. All liquids must be thickened! • Pills must be crushed and mixed with thick liquid. • No liquid medication! • Further functional swallowing assessments (FEES, VFES) • Refer to Speech and Language Therapist (SLT) *Supplementation with nasogastric tube or parenteral*
0-9	Preliminary investigation unsuccessful or Semisolid swallow unsuccessful	Severe dysphagia with a high risk of aspiration	• NPO (non per os = nothing by mouth) • Further functional swallowing assessment (FEES, VFES) • Refer to Speech and Language Therapist (SLT) *Supplementation with nasogastric tube or parenteral*

Trapl, M. et al. Stroke 2007;38:2948-2952

Stroke

American Heart Association. | American Stroke Association.
Learn and Live.

V-VST
Volume Viscosity Swallow Test

Clinical Nutrition (2008) **27**, 806–815

available at www.sciencedirect.com

ScienceDirect

http://intl.elsevierhealth.com/journals/clnu

ORIGINAL ARTICLE

Accuracy of the volume-viscosity swallow test for clinical screening of oropharyngeal dysphagia and aspiration☆

Pere Clavé [a,b,c,*], Viridiana Arreola [a], Maise Romea [a], Lucía Medina [a], Elisabet Palomera [a], Mateu Serra-Prat [a,c]

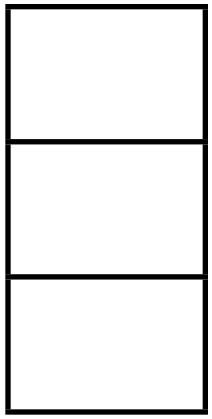
[a] *Unitat d'Exploracions Funcionals Digestives, Department of Surgery, Hospital de Mataró, Universitat Autònoma de Barcelona, Carretera de Cirera s/n, 08304 Mataró, Spain*
[b] *Fundació de Gastroenterologia Dr. Francisco Vilardell, Barcelona, Spain*
[c] *Centro de Investigación Biomédica en Red, Enfermedades Hepáticas y Digestivas (Ciberehd), Instituto de Salud Carlos III, Ministerio de Sanidad y Consumo, Spain*

Test la protection

Toux

Modification de la voix

Désaturation > 3%



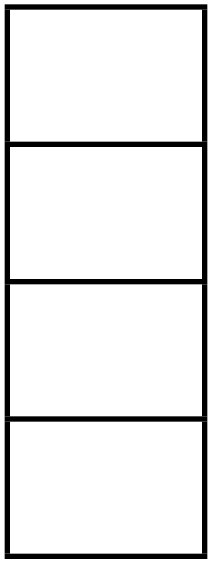
Test de la propulsion

Bavage

Résidu oral

Déglutitions multiples

Résidu pharyngé



Différentes consistances et volumes

Altération de **la propulsion** de la déglutition

Résidus

Moins de risque respiratoire

Risque nutritionnel

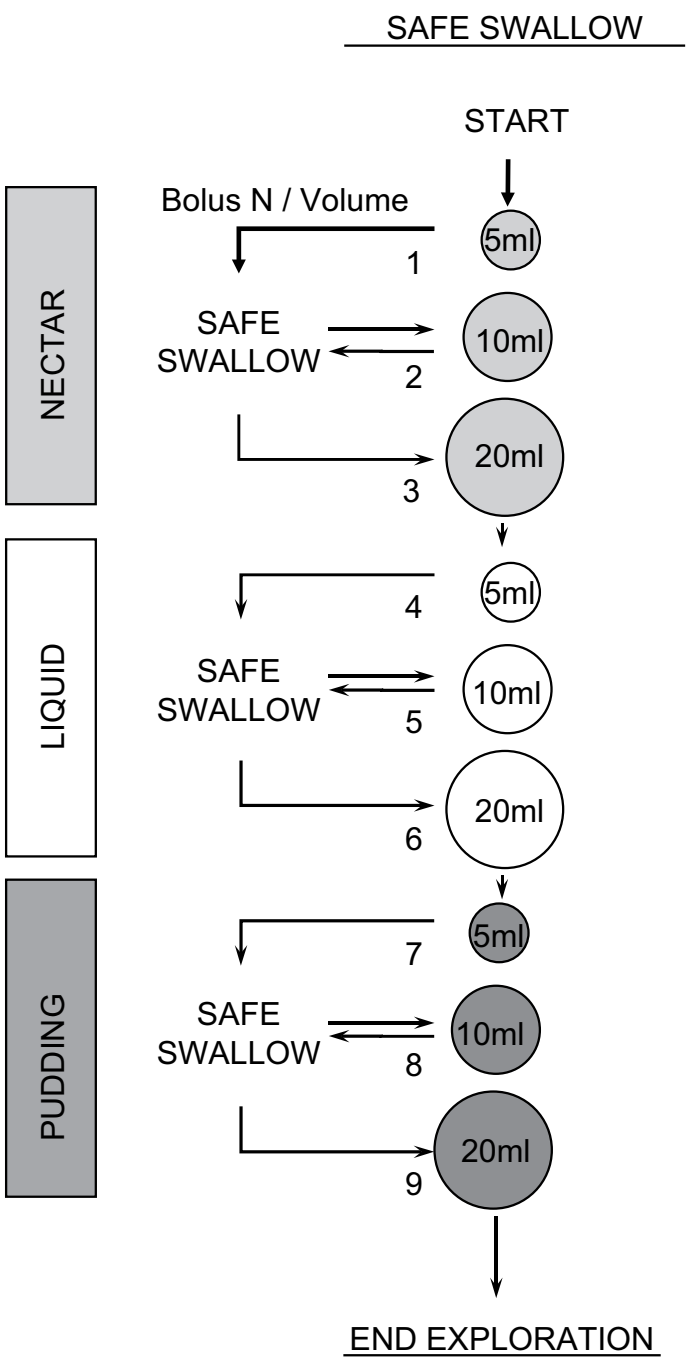
⇨ Viscosité la plus adaptée, le plus haut volume

Altération de la **protection** de la déglutition

Risque respiratoire

Risque nutritionnel

⇨ Viscosité sans risque, le plus haut volume

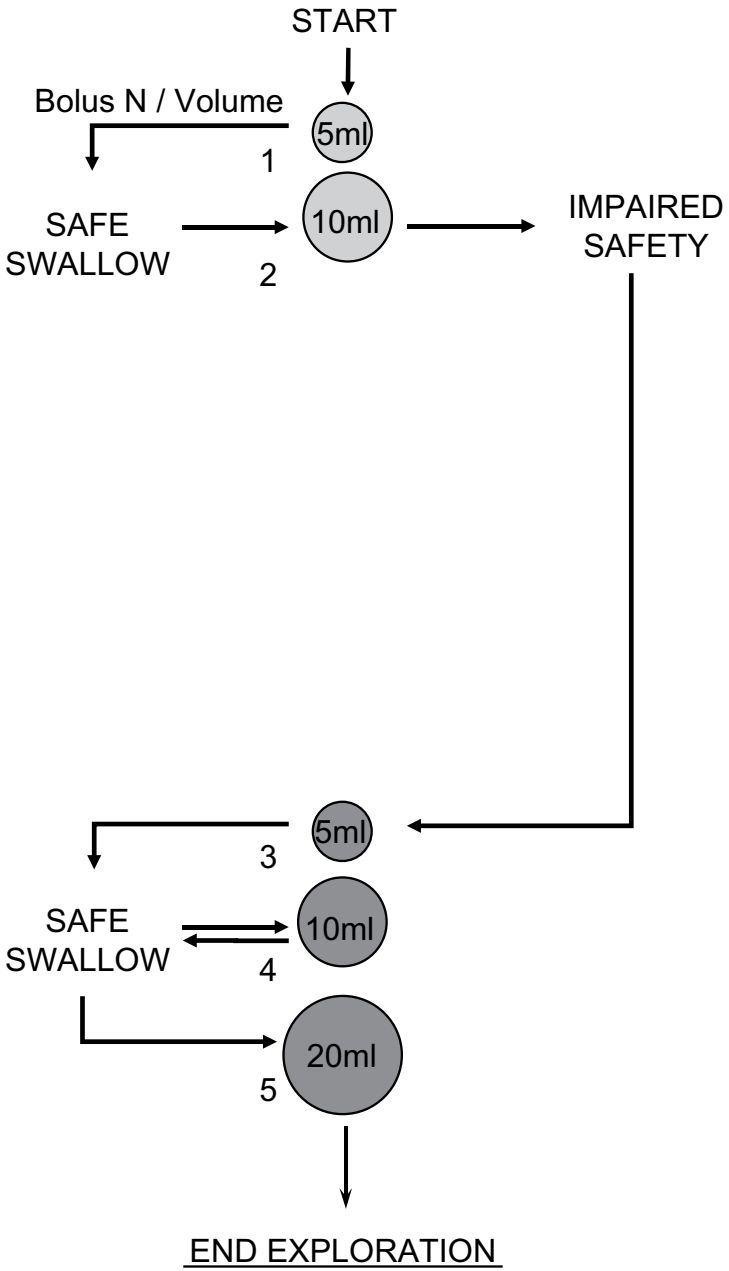


Test des consistances

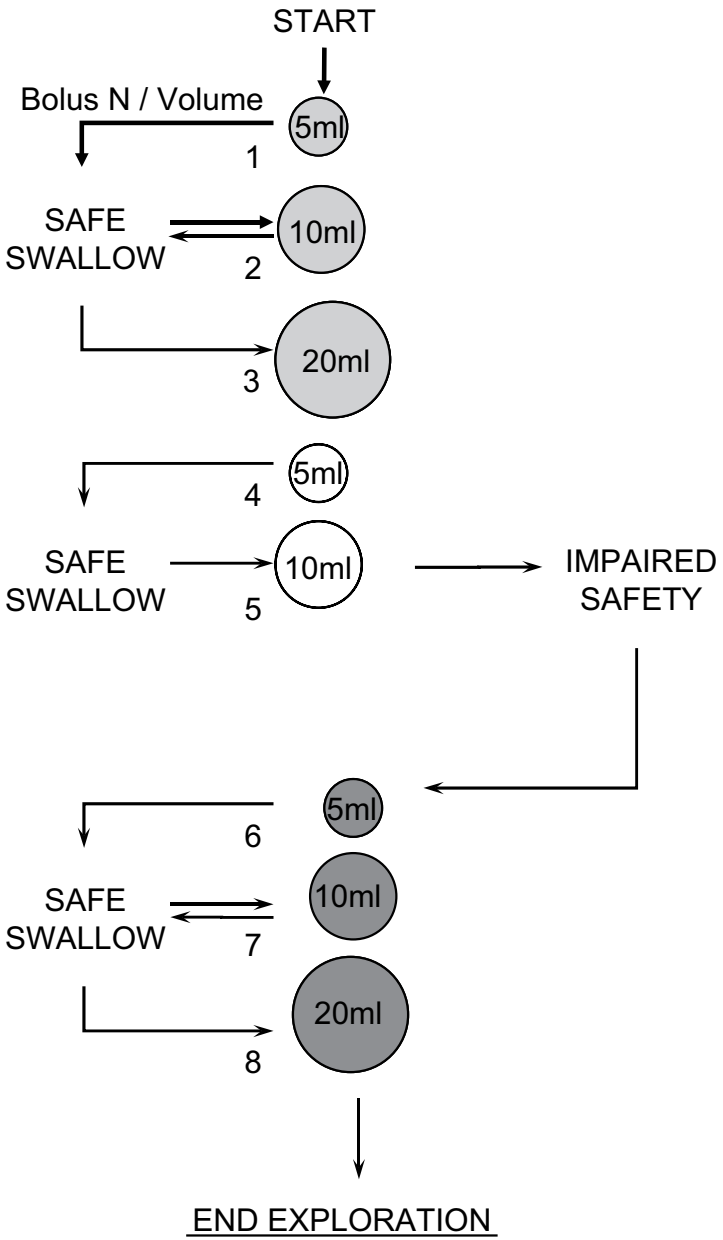
Test des volumes

Oxymétrie: ↘ SaO2 > 3%

IMPAIRED SAFETY AT NECTAR



IMPAIRED SAFETY AT LIQUID



NOM :	Prénom :	Date :

1/ DEGLUTITION SECHE (Salive)

Vigilance (le patient est capable d'être attentif au moins 30 minutes)	**Oui = 1**	
Toux (le patient est capable de se racler la gorge)	**Oui = 1**	
Déglutition sur ordre (le patient est capable d'avaler sa salive)		
Avec succès	**Oui = 1**	
Bavage	**Non = 1**	
Voix mouillée	**Non = 1**	
	TOTAL	**0**

Si score de 1 à 4 : STOP
Si score = 5 continuer au 2

2/ DEGLUTITION de CONSISTANCE et de VOLUME variables (VVST)

SaO2 ____ % **(si < 92% : STOP)**

SECURITE

	Nectar			Liquide			Pudding		
	5 ml	10 ml	20 ml	5 ml	10 ml	20 ml	5 ml	10 ml	20 ml
Toux									
Modification de la voix									
Chute SaO2 > 3%									

EFFICACITE

	Nectar			Liquide			Pudding		
	5 ml	10 ml	20 ml	5 ml	10 ml	20 ml	5 ml	10 ml	20 ml
Bavage									
Résidu oral									
Déglutitions multiples									
Résidu Pharyngé									

CONCLUSION — **Normal :** ____ **Sécurité altérée :** ____ **Efficacité altérée :** ____

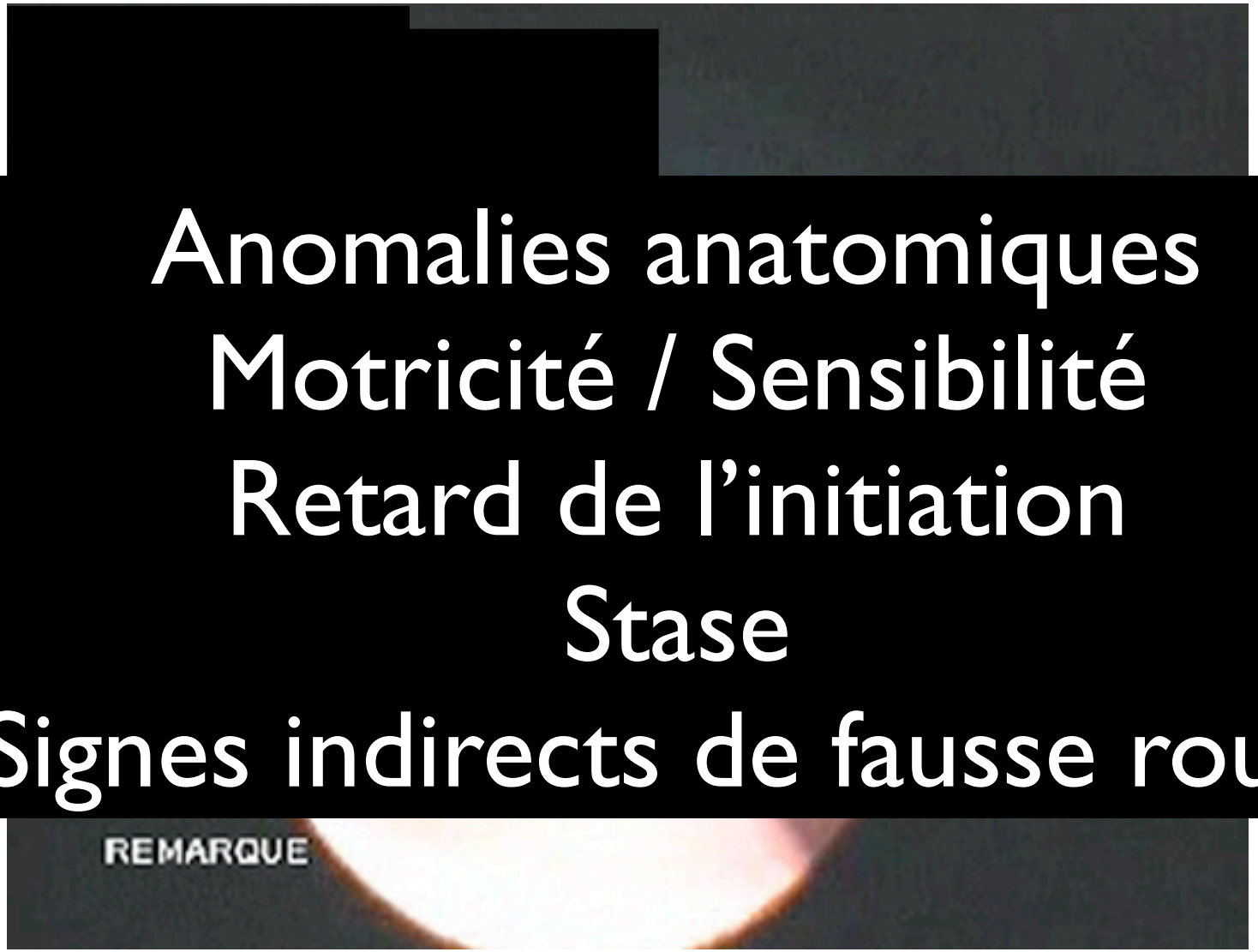
RECOMMANDATIONS

- **Aucune** ____
- **Exploration à prévoir** ____
- **Adapter les textures et les volumes** ____

	5 ml	10 ml	20 ml
Nectar			
Liquides			
Pudding			

Clave P, Arreola V, Romea M, Medina L, Palomera E, Serra-Prat M. Accuracy of the volume-viscosity swallow test for clinical screening of oropharyngeal dysphagia and aspiration. Clin Nutr. 2008 Dec;27(6):806-15.

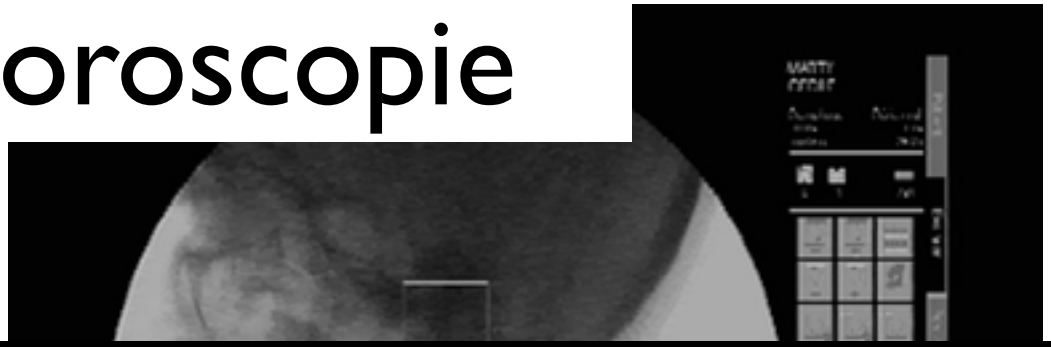
Nasofibroscopie



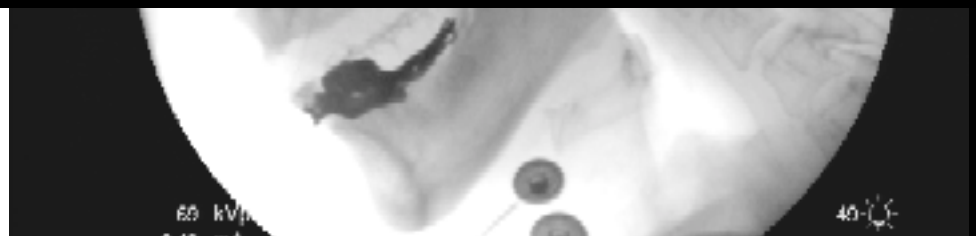
Anomalies anatomiques
Motricité / Sensibilité
Retard de l'initiation
Stase
Signes indirects de fausse route

Aviv, J. E., J. H. Martin, M. S. Keen, M. Debell and A. Blitzer (1993). "Air pulse quantification of supraglottic and pharyngeal sensation: a new technique." Ann Otol Rhinol Laryngol 102(10): 777-80.
Aviv, J. E., J. H. Martin, R. L. Sacco, D. Zagar, B. Diamond, M. S. Keen and A. Blitzer (1996). "Supraglottic and pharyngeal sensory abnormalities in stroke patients with dysphagia." Ann Otol Rhinol Laryngol 105(2): 92-7.

Vidéofluoroscopie



Anomalies fonctionnelles
Initiation de la déglutition
Fausses routes (niveau)
Résidu
Reflux nasal



Logemann, J. A. (1997). "Role of the modified barium swallow in management of patients with dysphagia." Otolaryngol Head Neck Surg 116(3): 335-8.

Défaut de protection des voies aériennes

Défaut de transport

Défaut de mécanisme d'expulsion

Les réponses

Risques de fausses routes sévères = alimentation non orale

Troubles importants de la propulsion pharyngées, défaut de protection pour toutes les consistances

Croghan, J. E., E. M. Burke, S. Caplan and S. Denman (1994). "Pilot study of 12-month outcomes of nursing home patients with aspiration on videofluoroscopy." Dysphagia 9(3): 141-6.

Veis, S. L. and J. A. Logemann (1985). "Swallowing disorders in persons with cerebrovascular accident." Arch Phys Med Rehabil 66(6): 372-5.

Les réponses

Fausse route ≠ pneumopathies de déglutition

Radiographic Aspiration as a Predictor of Aspiration Pneumonia

Population	Study design (level of evidence)	Pneumonia incidence (follow-up duration)	Positive predictive value for pneumonia	Negative predictive value for pneumonia	Significant findings
Stroke, n = 60[147]	Uncontrolled, retrospective (V)	30% (12 mo)	68%	69%	Predictive of sooner development of pneumonia but not pneumonia incidence
Mixed neurogenic, n = 40[10]	Uncontrolled, retrospective (V)	43% (12 mo)	50%	55%	Predictive for rehospitalization (82% positive predictive value) but not pneumonia
Stroke, n = 26[151]	Retrospective case-control (III)	19% (18 mo)	19%	97%	Predictive for pneumonia; odds ratio for pneumonia, 7.6[a]; odds ratio for death, 9.2[b]
Stroke, n = 115[152]	Randomized control trial (II)	7% (12 mo)	?	?	Not predictive of pneumonia; low incidence of pneumonia because of selection criteria; low statistical power
Stroke, n = 121[153]	Uncontrolled, prospective (V)	25% (1 wk)	35%	84%[c]	Not predictive of pneumonia or mortality

Les réponses

Alimentation non orale ≠ prévention des pneumopathies de déglutition

Croghan JE, Burke EM, Caplan S, Denman S. Pilot study of 12-month outcomes of nursing home patients with aspiration on videofluoroscopy. Dysphagia 1994;9(3):141-6.

Précoce, SNG ou gastrostomie

Dennis MS, Lewis SC, Warlow C. Effect of timing and method of enteral tube feeding for dysphagic stroke patients (FOOD): a multicentre randomised controlled trial. Lancet 2005;365(9461):764-72.

Les réponses

Pas de fausses routes, stase modérée

Pas de fausses routes pour certaines consistances, stase modérée

- Mesures adaptatives alimentaires
  - Enjeu majeur actuel
- Rééducation

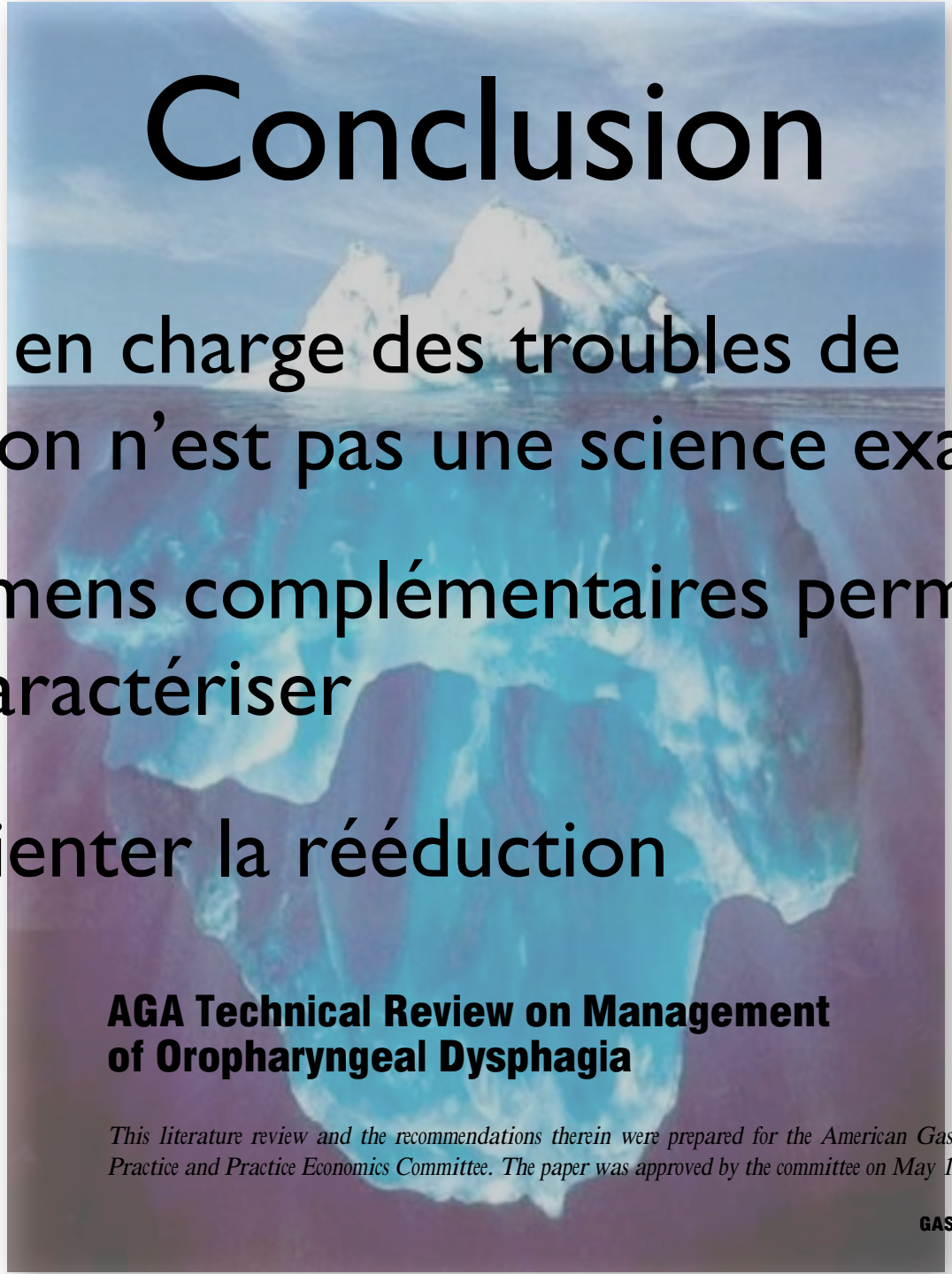
Logemann, J. A. (1997). "Role of the modified barium swallow in management of patients with dysphagia." Otolaryngol Head Neck Surg 116(3): 335-8.

Conclusion

La prise en charge des troubles de déglutition n'est pas une science exacte

Les examens complémentaires permettent de les caractériser

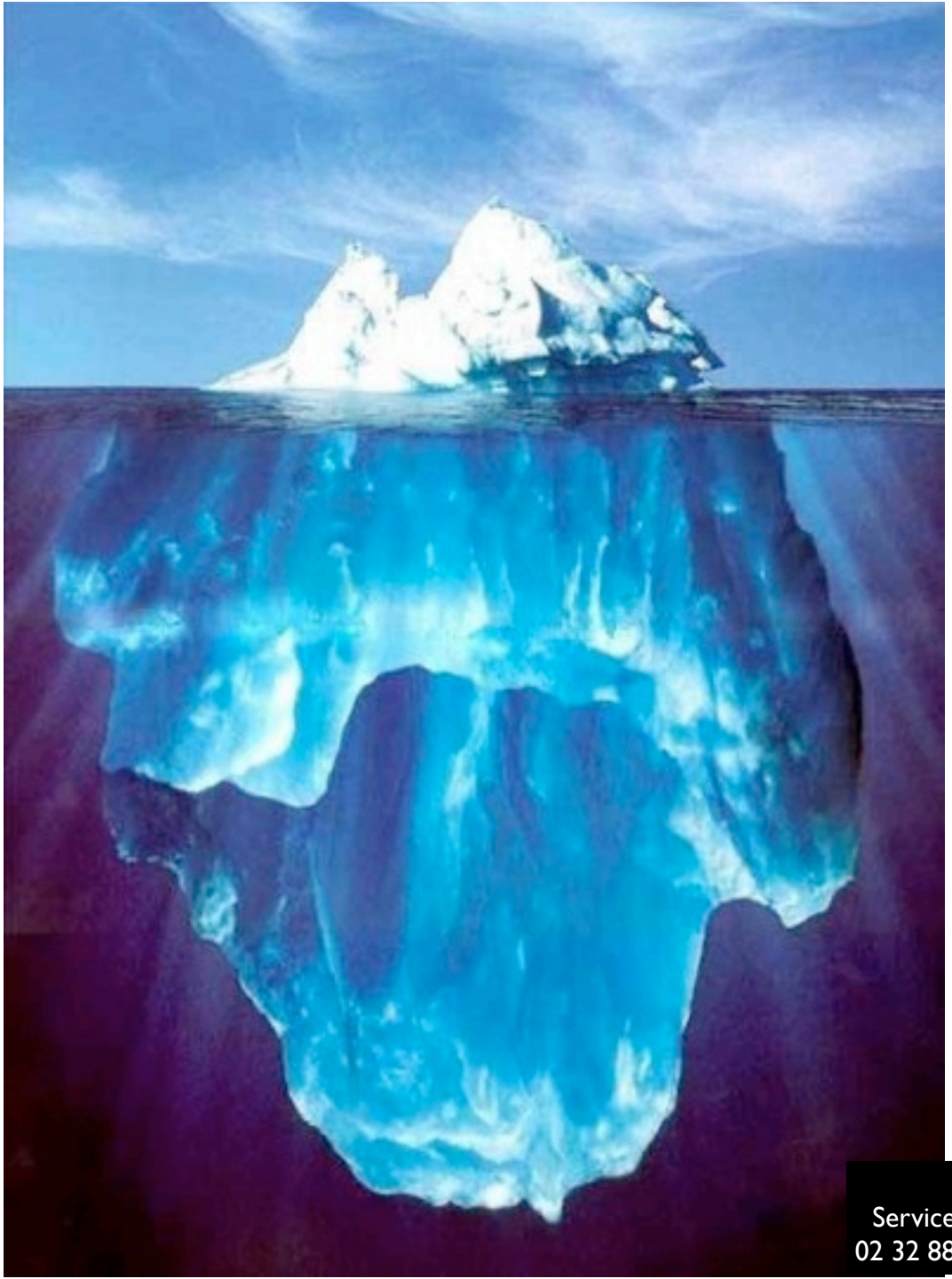
Pour orienter la rééduction



AGA Technical Review on Management of Oropharyngeal Dysphagia

This literature review and the recommendations therein were prepared for the American Gastroenterological Association Clinical Practice and Practice Economics Committee. The paper was approved by the committee on May 17, 1998.

GASTROENTEROLOGY 1999;116:455–478



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