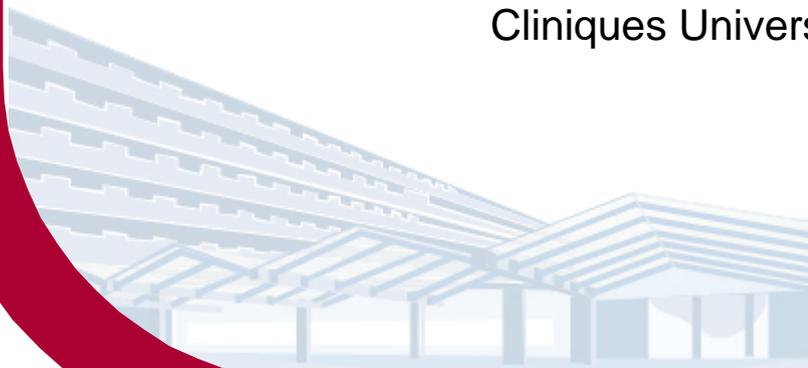
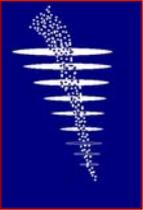


Physiopathologie iatrogène des Troubles de la Déglutition

G. DESUTER MD, MS, FACPE
Service ORL & Chirurgie Cervico-Faciale
Cliniques Universitaires Saint-Luc, Bruxelles



Physiologie



Les étapes de la déglutition

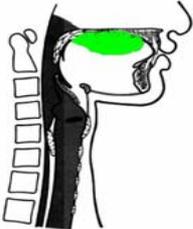


Fig. 1 : Temps volontaire

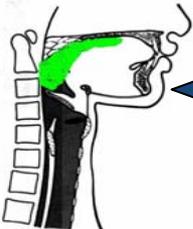


Fig. 2 : Déclenchement du temps réflexe.

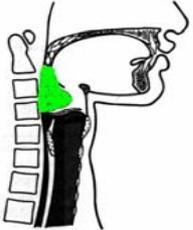


Fig. 3 : Temps pharyngé : propulsion du bolus, protection des voies aériennes (cavum et larynx fermés).

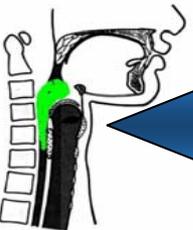


Fig. 4 : Passage à travers la bouche de l'oesophage

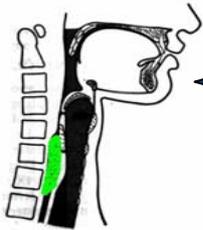
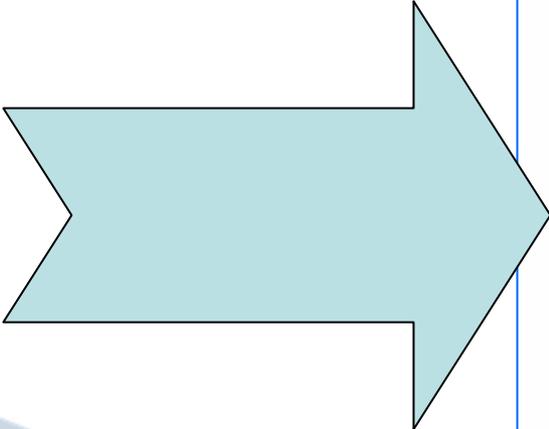


Fig. 5 : Temps oesophagien

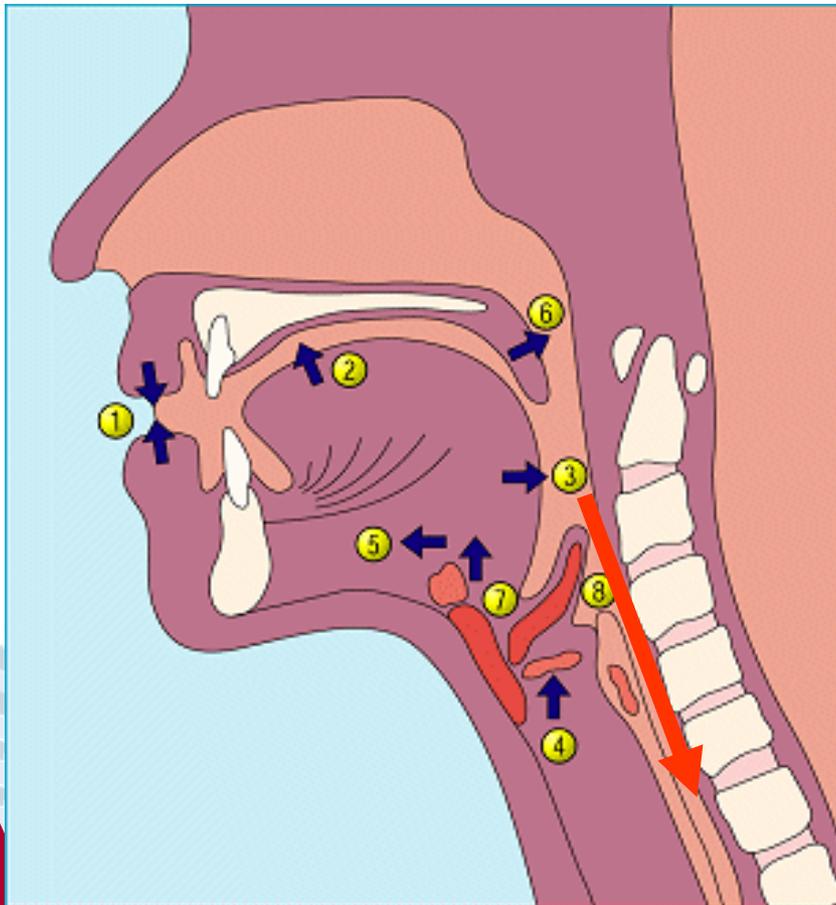
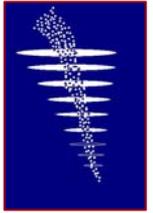
Phase Orale

P. Pharyngo-oesophagienne

Phase Oesophagienne

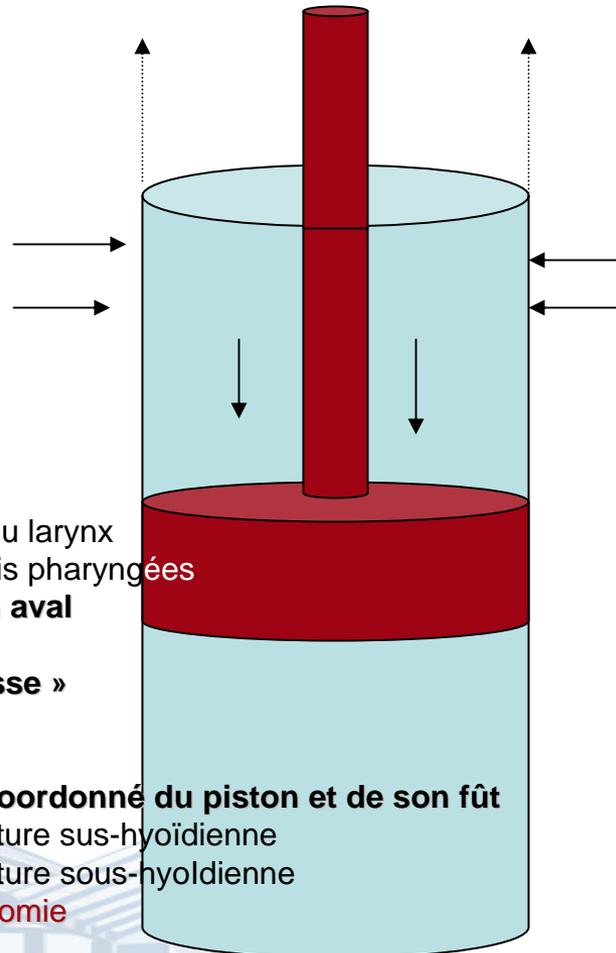


« La » Seconde Critique !



1. Occlusion Labiale
2. Pression linguo-palatine
3. « Pistonnage » lingual
4. Fermeture glottique
5. Anté-pulsion hyoïdienne (m. sus-hyoïdiens)
6. Erection vélaire
7. Ascencion Laryngée (m. sous-hyoïdiens)

Le Piston Lingual



1. Hermétisme

- Intégrité linguale
- Intégrité vélaire
- Fermeture étanche du larynx
- Résistance des parois pharyngées

2. Absence de résistance en aval

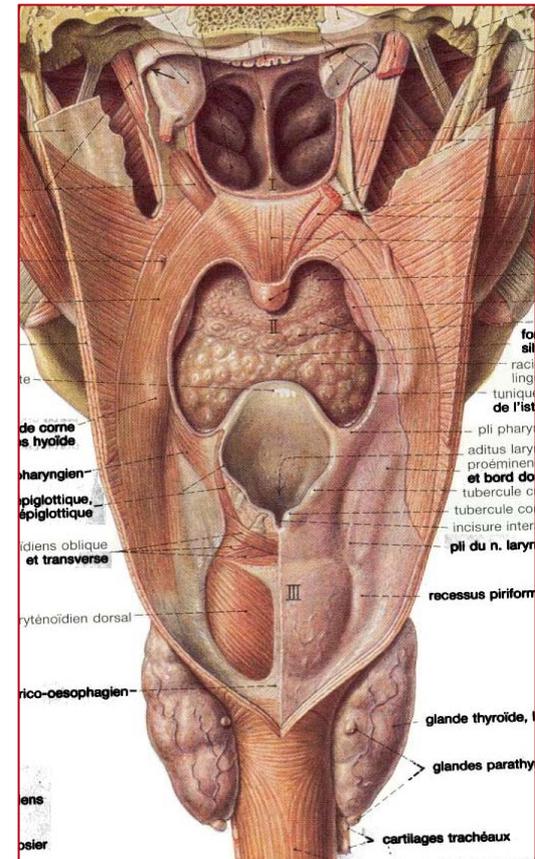
- Relaxation du SSO

3. Bonne pression de « chasse »

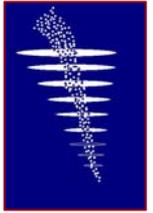
- Tonus lingual
- Tonus pharyngé

4. Mouvement contraire et coordonné du piston et de son fût

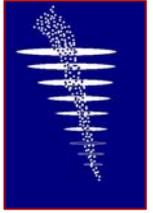
- Contraction musculature sus-hyoïdienne
- Contraction musculature sous-hyoïdienne
- Absence de trachéotomie



Causes iatrogènes de la Dysphagie



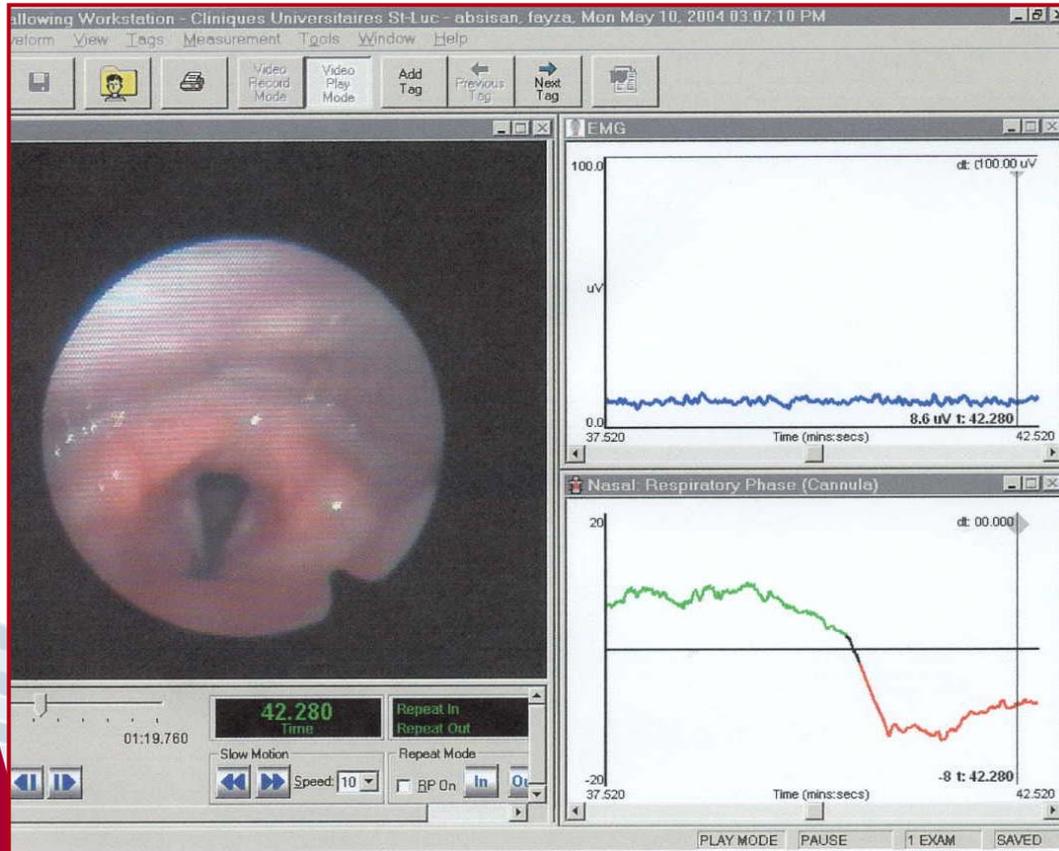
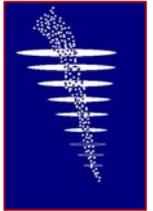
- « Les Tuyaux »
 - Trachéotomie
 - Intubations prolongées
 - Sondes Naso-gastriques
- « Les Substances »
 - Les médicaments
 - L'anesthésie
- « Les Traitements »
 - Radiothérapie
 - Chirurgie
 - Chimiothérapie



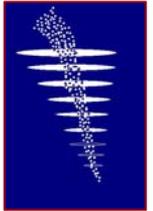
« Les Tuyaux »

- Trachéotomie :
 - Déficit d'ascension du larynx
 - Interruption du cycle déglutition/respiration
 - Sténoses trachéales
- Intubation:
 - Sténoses trachéales, phases inspiratoires prolongées, mauvaise qualité d'apnée
- Sonde Naso Gastrique:
 - Dégâts glottiques : atteinte m. crico-aryténoïdien post, EEGER, hyposensibilité X

Sténoses sous glottiques



Nasogastric Tube Syndrome



Otolaryngology-Head and Neck Surgery (2006) 135, 677-679

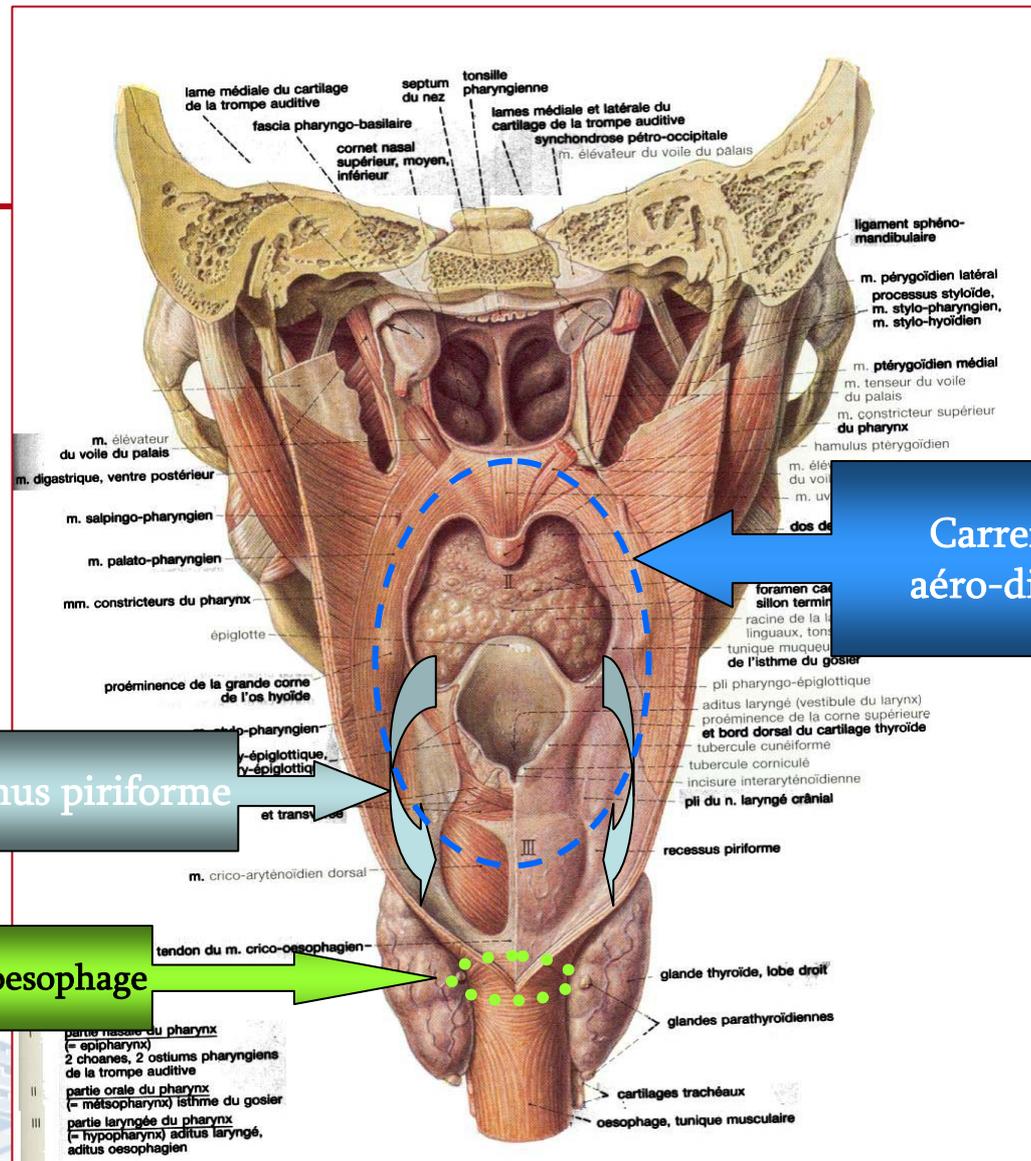
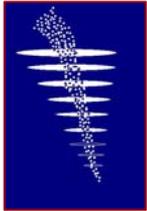
REVIEW

A rare but serious entity: Nasogastric tube syndrome

Valérie Julie Brousseau, BSCh, MDCM, and Karen M. Kost, MDCM, Montréal, Québec, Canada

Table 1
Frequency of presenting symptoms of nasogastric tube syndrome

Symptom	Number (%)
Pain	13 (62)
Stridor	9 (43)
Dysphagia	6 (29)
Hoarseness	5 (24)
Dyspnea	3 (14)
Otalgia	1 (5)
Fever	1 (5)



Carrefour aéro-digestif

Sinus piriforme

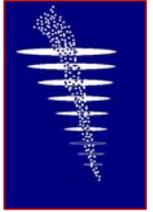
Sphincter supérieur de l'oesophage

partie nasale du pharynx (= epipharynx)
2 choanes, 2 ostiums pharyngiens de la trompe auditive
II partie orale du pharynx (= métopharynx) isthme du gosier
partie laryngée du pharynx (= hypopharynx) aditus laryngé, aditus oesophagien

D'après Sobotta

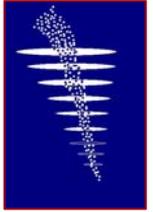


« Les Substances »



- **Médicaments** (neuroleptiques, certaines anti-dépresseurs) (médications à effet rhéologiques)
 - Action musculaire directe, diminution de la contractilité
 - Action de blocage mécanique au niveau de l'hypopharynx ou du SSO
 - Thrombose VJI = œdème hypopharyngé
- **Anesthésie**
 - Diminution sensibilité oro et hypo-pharyngées
 - AIT sur bas débit
 - Hémorragies cérébrales sur HTA

Neuroleptiques



Neuroleptic-Induced Dysphagia

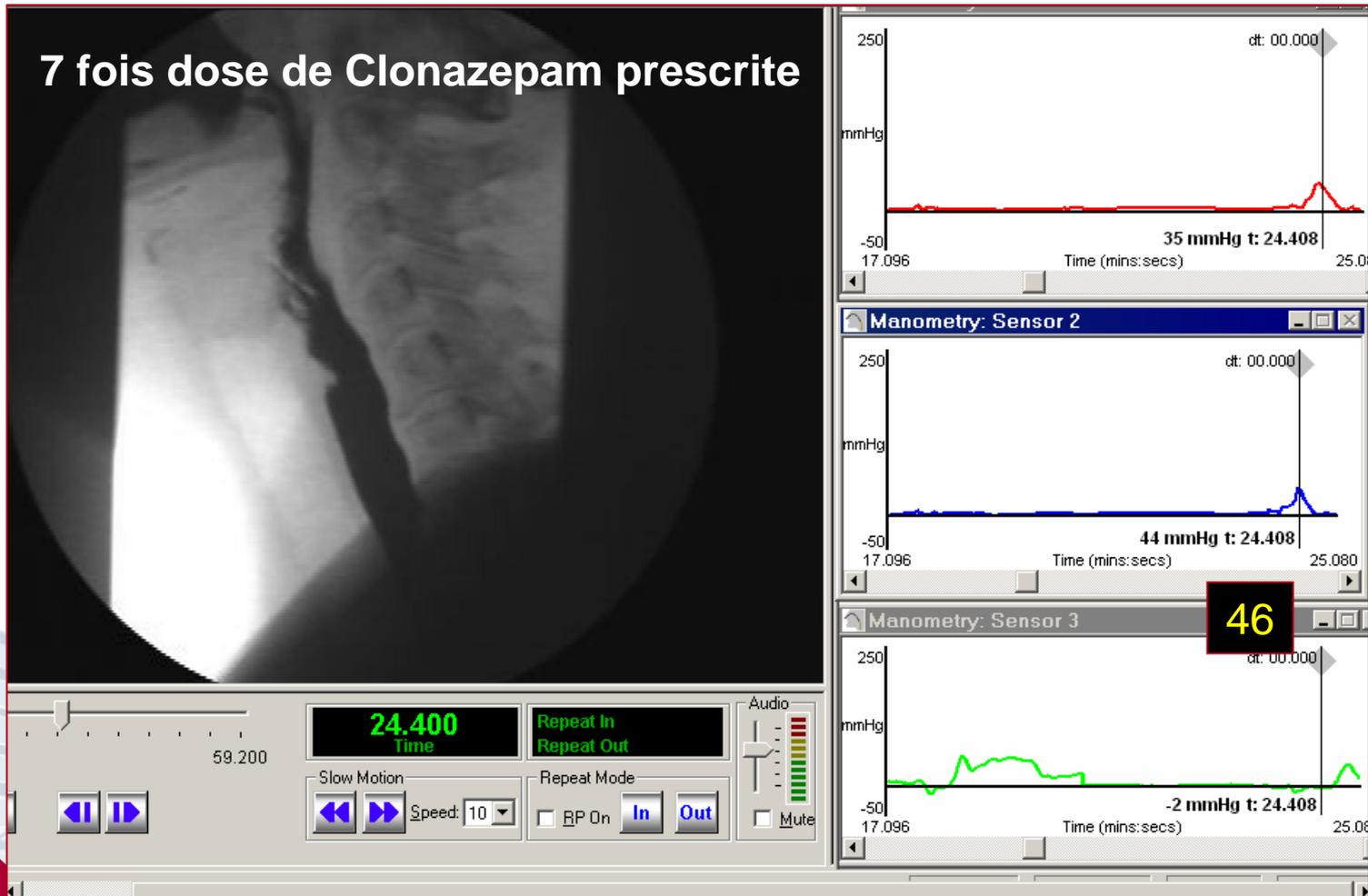
Lisa Guttman Sokoloff, BSc (C.D.), MS¹ and Rosemarie Pavlakovic, BSc, Phm²

Services of ¹Speech Pathology, Rehabilitation Institute of Toronto (formerly The Queen Elizabeth Hospital), Toronto, Ontario, Canada and

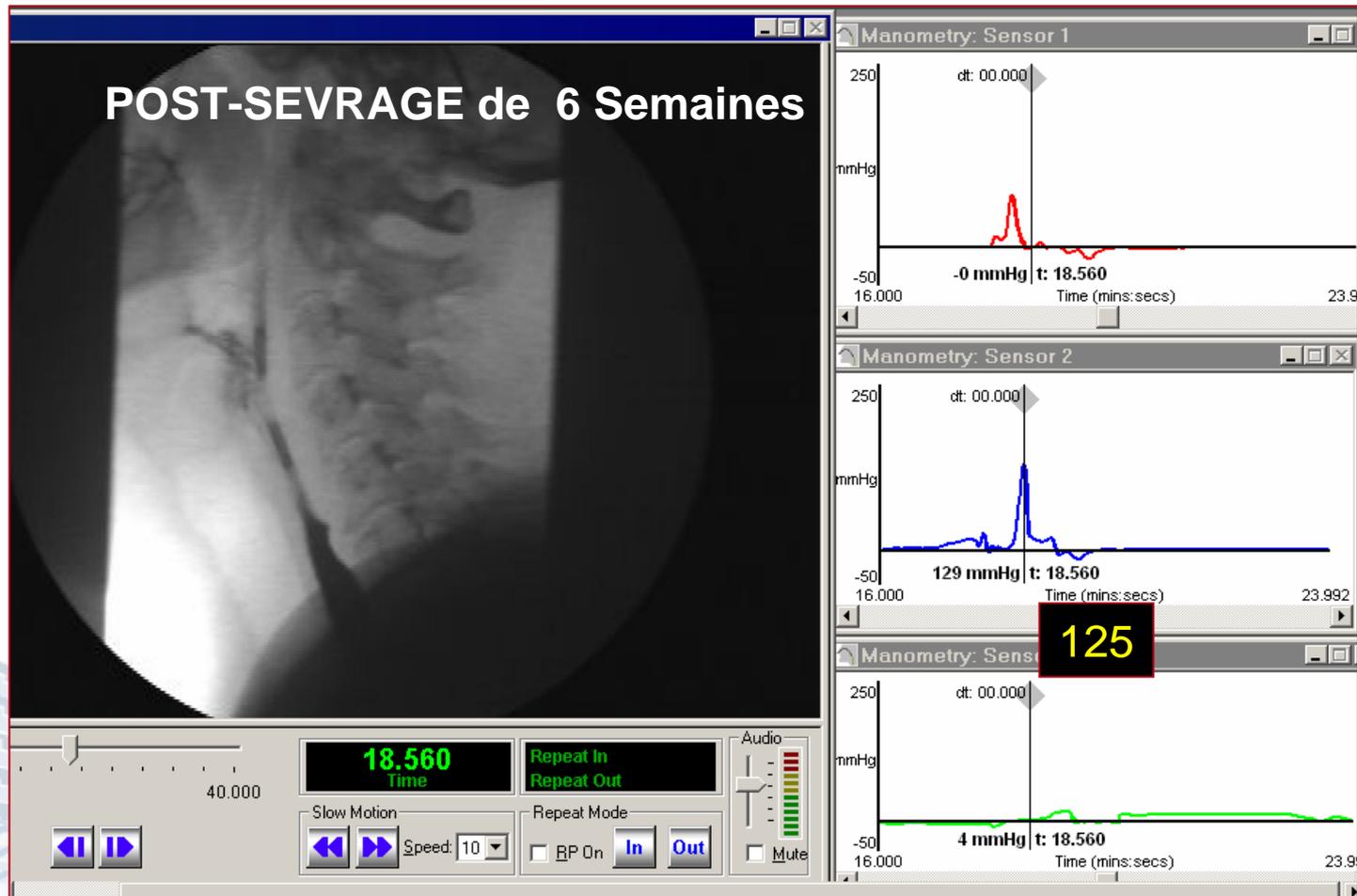
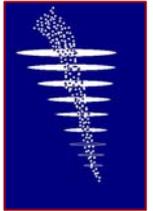
²Pharmacy, Sunnybrook Health Science Centre, University of Toronto, North York, Ontario, Canada



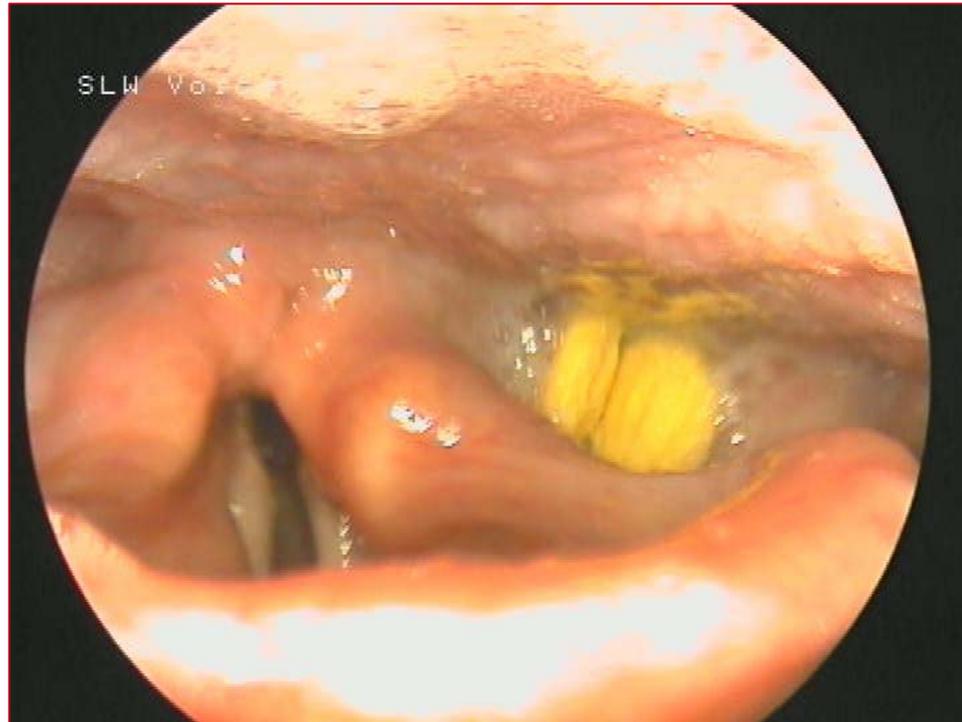
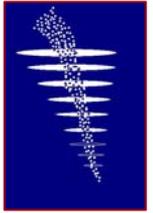
Intoxication Médicamenteuse (Clonazepam)

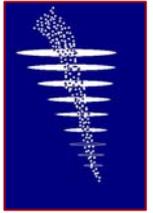


Intoxication Médicamenteuse (suite) (Clonazepam)



Corps Etrangers

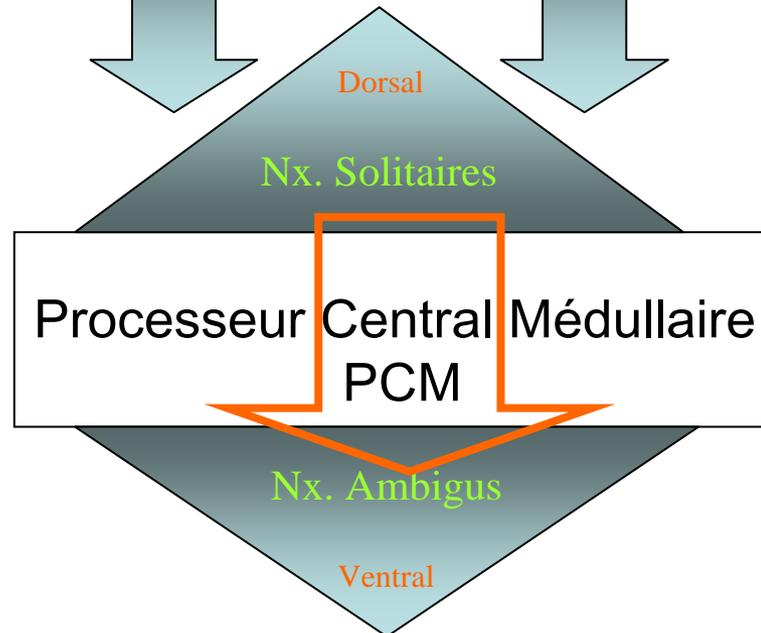




Afférentations
sensitives périphériques

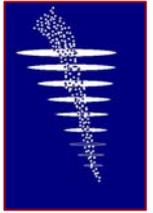
Afférentations
corticales

Autres
afférentations sensibles



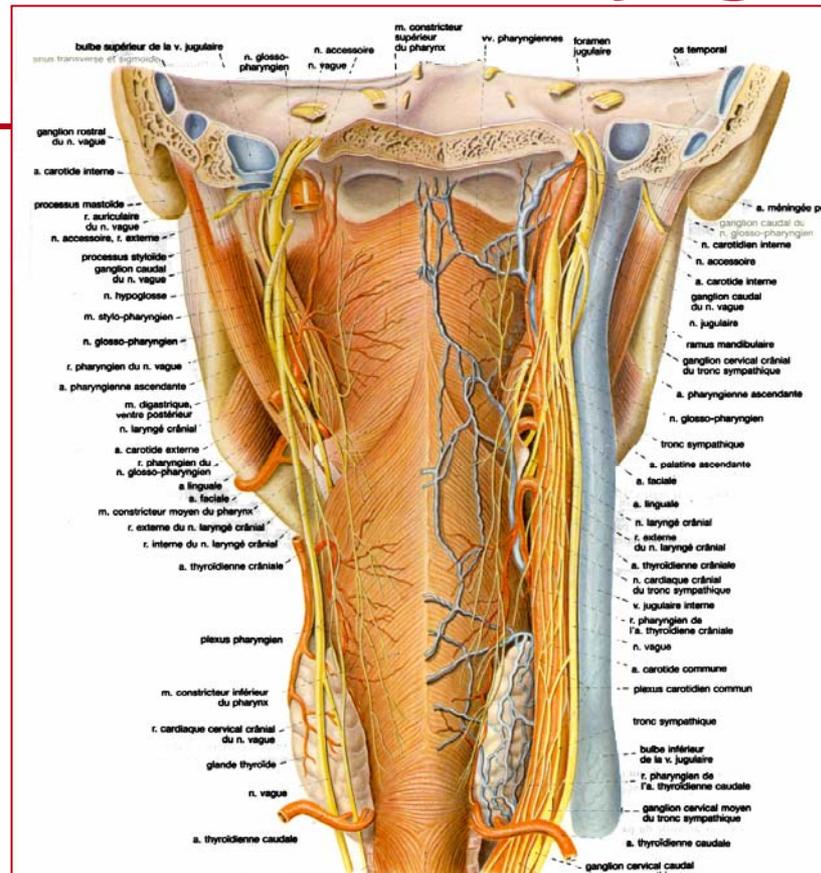
Efférentations motrices

« Les Traitements »



- Chirurgie
 - Chirurgie de la colonne cervicale par abord antérieur
 - Chirurgie thyroïdienne
 - Chirurgie de base de crâne (chémoadectomes)
 - Chirurgie oro-pharyngienne
 - Chirurgie hypo-pharyngienne
- Radiothérapie
 - « Frozen Neck », fibrose massive et progressive
- Chimiothérapie
 - Effet musculo-toxique direct
 - Accident de positionnement de voie centrale

Plexus Pharyngé



D'après Sobotta

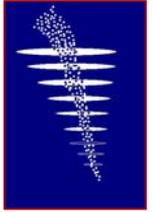
Role of the Pharyngeal Branch of the Vagus Nerve in Laryngeal Elevation and UES Pressure During Swallowing in Rabbits

Shin-ichi Fukushima, DDS,¹ Tomio Shingai, PhD,² Jun-ichi Kitagawa, DDS,³ Yoshihiro Takahashi,³ Yo Taguchi, DDS, PhD,¹ Tadashi Noda, DDS, PhD,¹ and Yoshiaki Yamada, DDS, PhD³

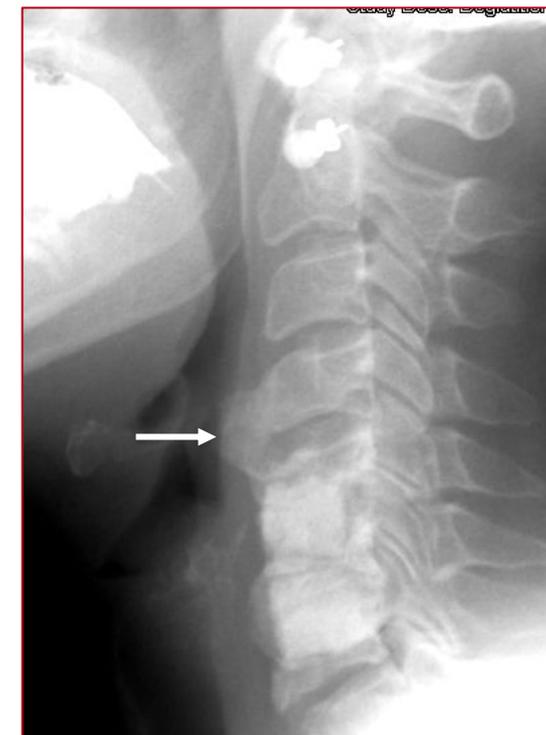
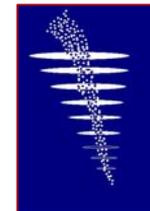
Divisions of ¹Pediatric Dentistry, ²Chemoreception Science, and ³Oral Physiology, Niigata University Graduate School of Medical and Dental Sciences, Niigata 951-8514, Japan



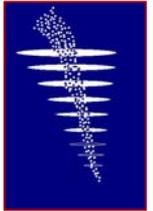
Atteinte du N. Vague (X)



Chirurgie de la colonne cervicale



Dysphagie Proportionnelle au Defect (+ RXth)

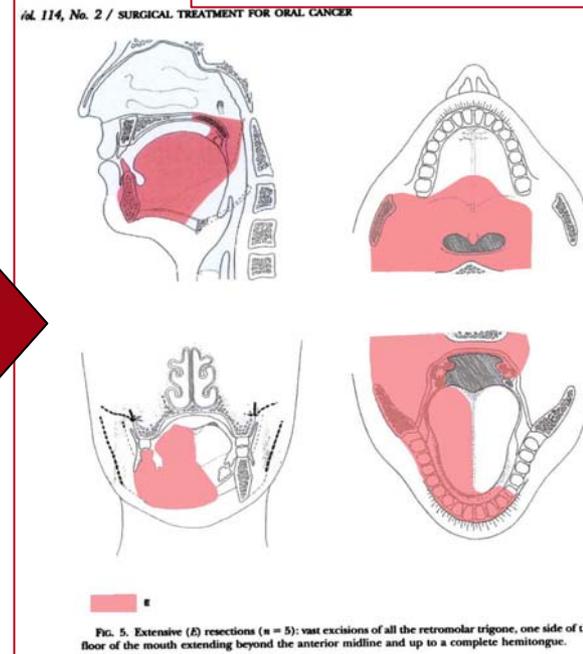
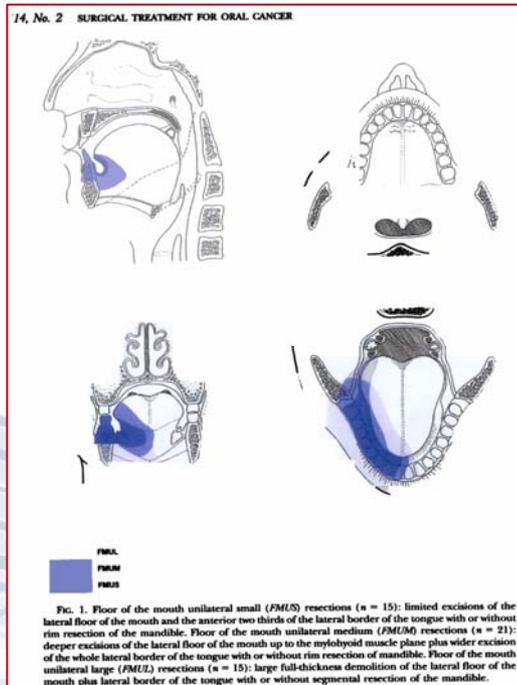


Chewing and Swallowing after Surgical Treatment for Oral Cancer: Functional Evaluation in 196 Selected Cases

Giovanni Nicoletti, M.D., David S. Soutar, Ch.M., F.R.C.S.Ed., F.R.C.S.Glas., M.B., Ch.B.,
Mary S. Jackson, L.C.S.T., Alan A. Wrench, B.Sc.(Hons.), Ph.D., and
Gerry Robertson, Ph.D., F.R.C.R., F.R.C.P.

Pavia, Italy; and Edinburgh and Glasgow, Scotland, United Kingdom

PLASTIC AND RECONSTRUCTIVE SURGERY, August 2004



David Soutar (suite)

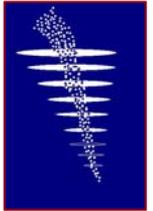


TABLE III

Functional Intraoral Glasgow Scale to Self-Assess Patients' Speech, Chewing, and Swallowing

	Score
Speech	
Always understandable	5
Needing sometimes repetitions	4
Needing many times repetitions	3
Understandable only by relatives	2
Incomprehensible	1
Chewing	
Any food without difficulty	5
Solid food with difficulty	4
Semisolid food without difficulty	3
Semisolid food with difficulty	2
Chewing impossible	1
Swallowing	
Any food without difficulty	5
Solid food with difficulty	4
Semisolid food only	3
Liquid only	2
Swallowing impossible	1

TABLE IV

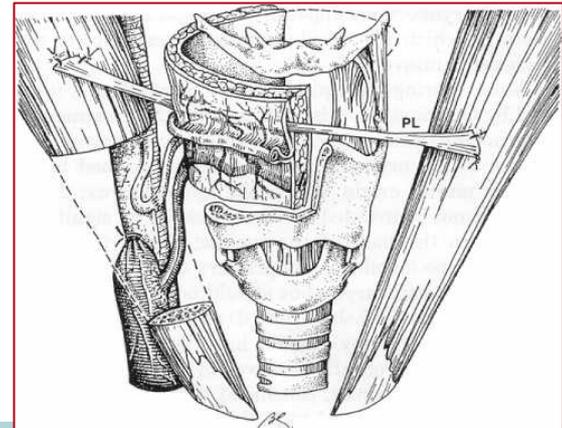
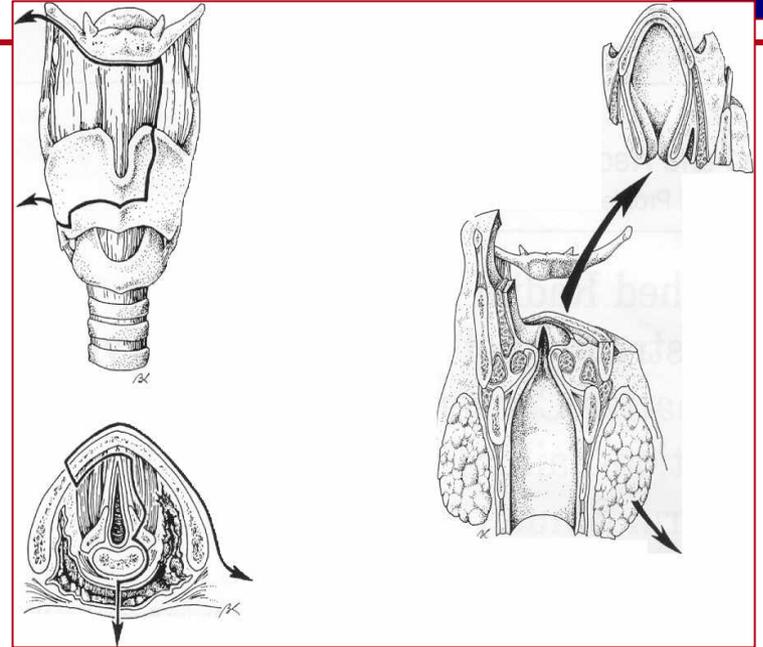
Distribution of the Functional Intraoral Glasgow Scale Scores (Median, 25th, and 75th Percentiles) for Speech, Chewing, and Swallowing in the Groups Homogeneous for Site and Size of Resection

Groups	Patients (n)	Speech			Chewing			Swallowing		
		Med	25p	75p	Med	25p	75p	Med	25p	75p
Floor of the mouth										
Unilateral small	15	5.00	5.00	5.00	4.00	3.00	5.00	5.00	4.00	5.00
Bilateral small	16	5.00	4.00	5.00	4.00	3.00	5.00	5.00	4.00	5.00
Unilateral medium	21	5.00	4.00	5.00	4.00	2.00	5.00	5.00	3.00	5.00
Bilateral medium	25	4.00	4.00	5.00	4.00	3.00	4.00	4.00	3.00	5.00
Unilateral large	15	5.00	4.00	5.00	3.00	2.00	4.00	4.00	3.00	5.00
Bilateral large	15	3.00	3.00	4.00	2.00	1.00	2.00	3.00	2.00	3.00
Tongue										
Lateral small	11	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Lateral medium	18	5.00	4.75	5.00	4.50	3.75	5.00	5.00	3.75	5.00
Hemiglossectomies	12	4.00	3.25	4.00	2.50	1.00	4.00	3.00	2.00	4.75
Retromolar trigone										
Small-medium	14	5.00	5.00	5.00	4.00	3.00	5.00	4.00	3.75	5.00
Large	29	4.00	4.00	5.00	3.00	1.50	4.00	3.00	2.00	4.00
Extensive	5	3.00	2.50	4.00	1.00	1.00	1.00	2.00	2.00	2.00

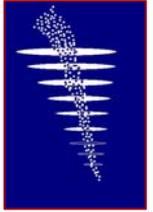
Med, median; 25p, 25th percentile; 75p, 75th percentile.



CHEP & HPLHSG



Facteurs favorables



- **Présence des cart. aryténoïdes**
- **Mobilité glottique conservée**
- **Absence de radiothérapie**
- **Petit défaut**

Voice and deglutition functions after the supracricoid and total laryngectomy procedures for advanced stage laryngeal carcinoma

JAMES PAUL DWORKIN, PhD, ROBERT J. MELECA, MD, MARK A. ZACHAREK, MD, ROBERT J. STACHLER, MD, RAZA PASHA, MD, G. G. ABKARIAN, PhD, RICHARD A. CULATTA, PhD, and JOHN R. JACOBS, MD, Detroit, Michigan, Ft Collins, Colorado, and Boone, North Carolina

Otolaryngology Head & neck Surge
Oct. 2004

Functional Outcomes After Supracricoid Laryngectomy.

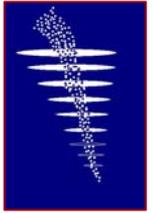
Laryngoscope. 111(9):1558-1564, September 2001.

Zacharek, Mark A. MD; Pasha, Raza MD; Meleca, Robert J. MD; Dworkin, James P. PhD; Stachler, Robert J. MD; Jacobs, John R. MD;

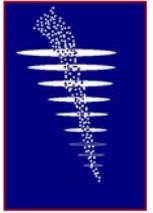
Marks, Steven C. MD; Garfield, Ilene MA



Reaction Fibreuse Post-Radique Tardive



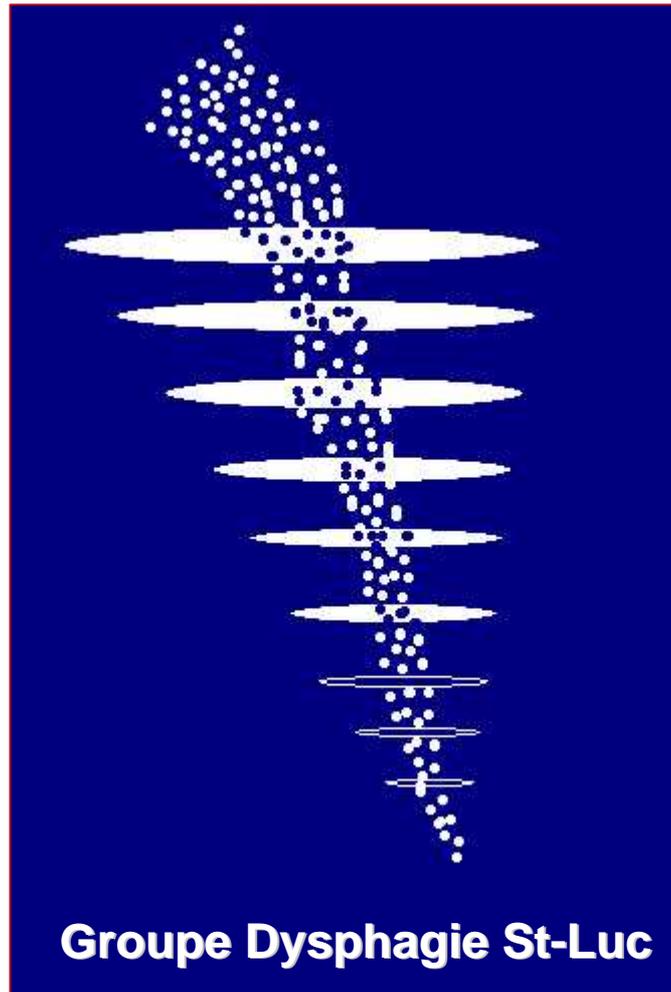
Radiotherapy... a never ending problem?



Dysphagia in Patients with Nasopharyngeal Cancer After Radiation Therapy: A Videofluoroscopic Swallowing Study

Yeun-Chung Chang, MD,¹ Ssu-Yuan Chen, MD,² Louis Tak Lui, MD,¹ Tyng-Guey Wang, MD,²
Teh-Chen Wang, MD,^{1,4} Tzu-Yu Hsiao, MD, PhD,³ Yiu-Wah Li, MD,¹ and I-Nan Lien, MD²

¹Department of Medical Imaging, National Taiwan University Hospital, Taipei, Taiwan; ²Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital, Taipei, Taiwan; ³Department of Otolaryngology, National Taiwan University Hospital, Taipei, Taiwan; and ⁴Department of Radiology, Taipei Municipal Yang-Ming Hospital, Taipei, Taiwan, Republic of China



Merci de Votre Attention