

Complications septiques de la chirurgie thoracique: empyème et fistules

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Chirurgie thoracique et endocrinienne

Hôpitaux Universitaires de Genève, Suisse

Conflits d'intérêt

- ▣ Novartis, advisory board
- ▣ Ipsen, advisory board
- ▣ Novadaq, travel grants

Complications septiques

- ▣ Mortalité (très) élevée
- ▣ Durée d'hospitalisation prolongée +++
- ▣ Diminution ++ de la qualité vie
- ▣ Perte de chance de bénéficier d'un traitement adjuvant si nécessaire

Différentes possibilités de prise en charge

- ▣ Thoracoscopie

Différentes possibilités de prise en charge

- ▣ Thoracoscopie
 - ▣ Empyème précoce
 - ▣ Sans fistule
 - ▣ Le poumon restant remplit la cavité pleurale

Différentes possibilités de prise en charge

- ▣ Thoracoscopie
- ▣ VAC intra-thoracique
(avec ou sans fistule)
- ▣ Myoplastie
(fermeture d'une fistule)

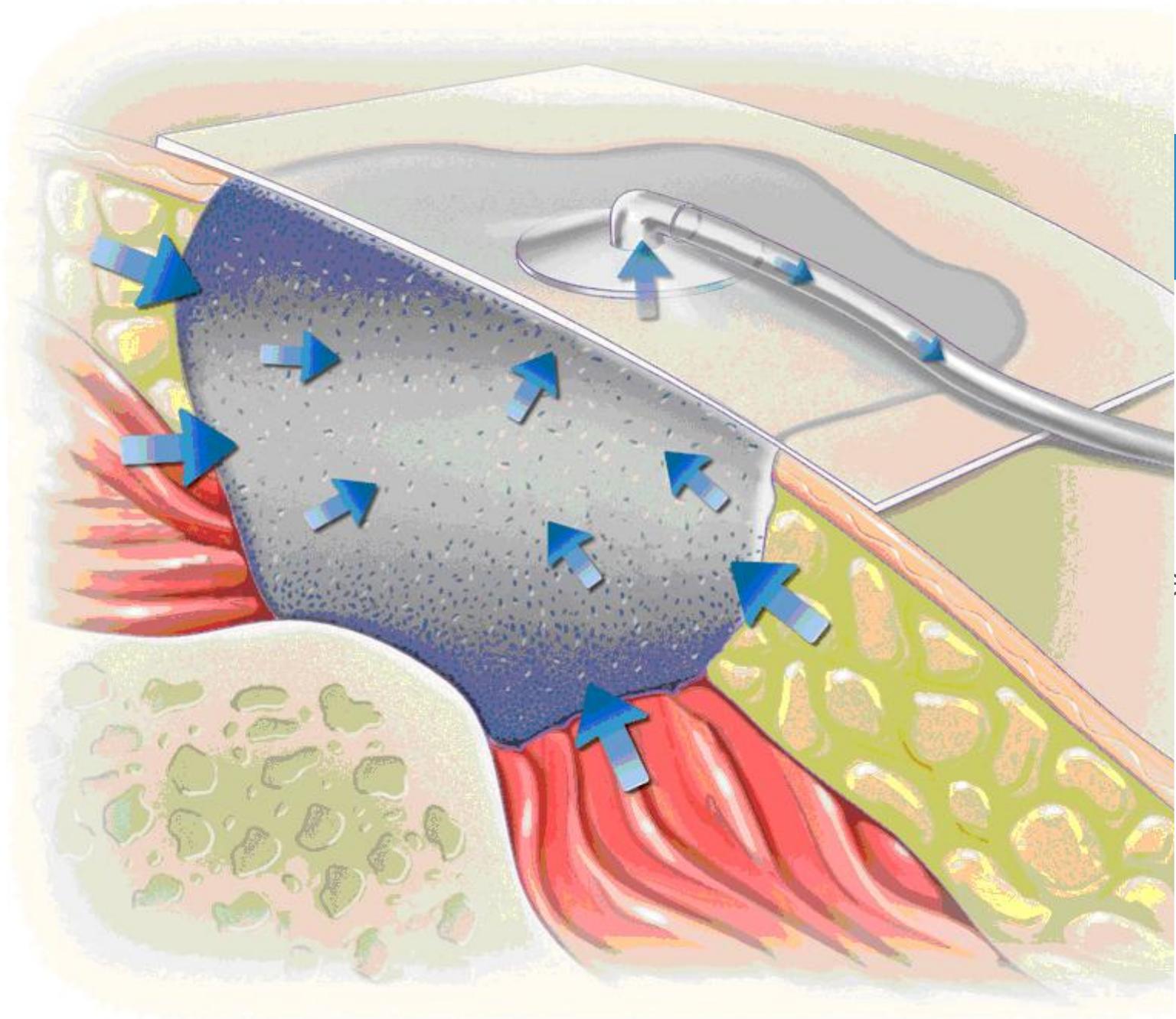
Différentes possibilités de prise en charge

- ▣ Thoracoscopie
- ▣ VAC intra-thoracique
(avec ou sans fistule)
- ▣ Myoplastie
(fermeture d'une fistule)
- ▣ Thoracostomie / thoracoplastie



VAC intra-thoracique, buts

- ▣ Accélérer la guérison de l'infection
- ▣ Stimuler le processus de granulation

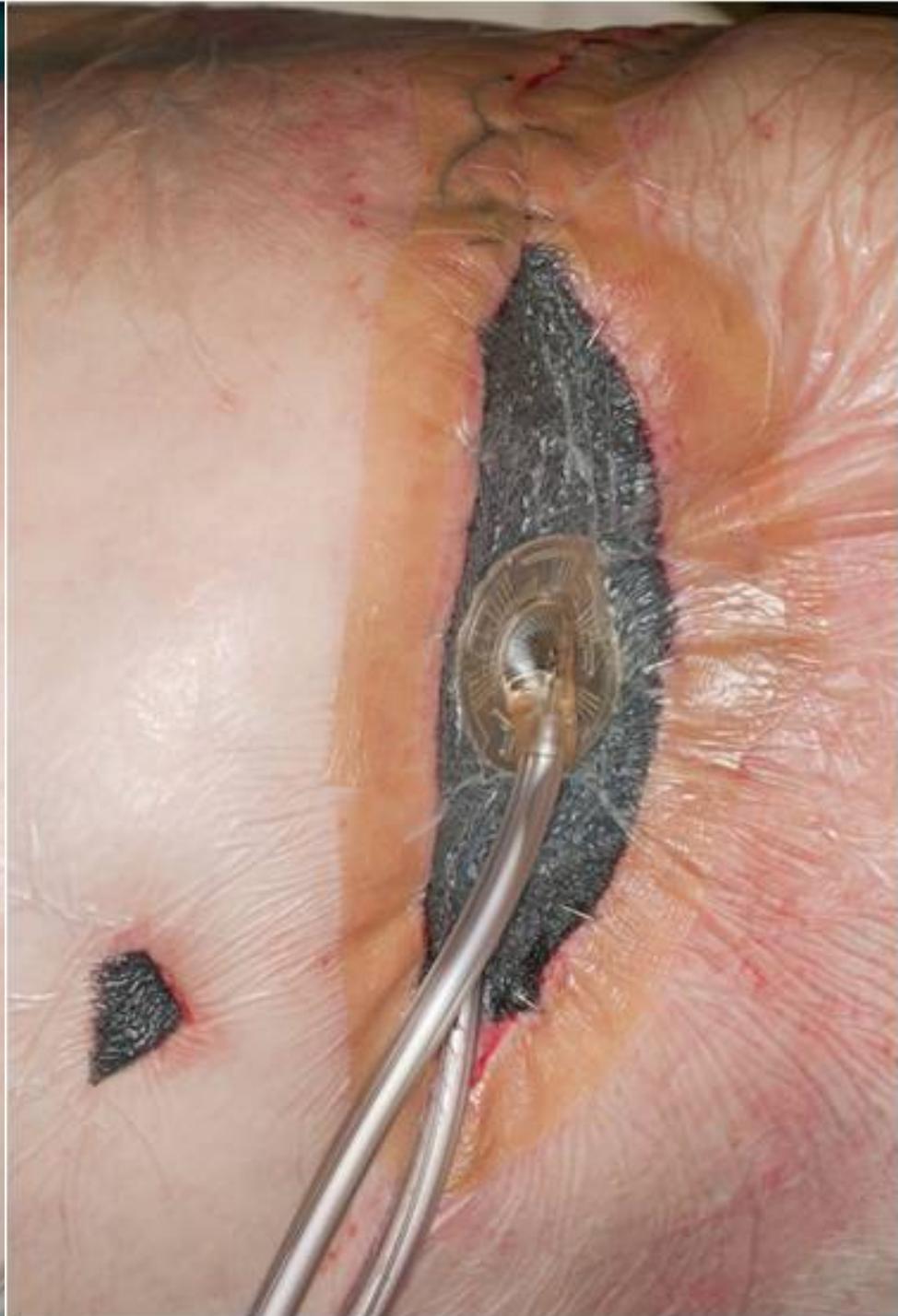


VAC intra-thoracique, buts

- ▣ Faisable avec ou sans fistule, dans toutes les indications d'infections de la cavité pleurale
 - ▣ Après chirurgie d'exérèse pulmonaire, y compris après pneumonectomie
 - ▣ Après chirurgie oesophagienne (résection, dilatation, Nissen, Boerhaave, By-Pass, etc...)
 - ▣ Suite à infection nécrosante

VAC intra-thoracique, principes

- ▣ Nettoyage, contrôle de l'infection, débridement des zones nécrosées.
- ▣ Fermeture de la fistule (oesophagienne ou bronchique)
 - ▣ Myoplastie
- ▣ VAC changé en moyenne 6 fois pour une durée totale de 23 jours
- ▣ Fermeture de la paroi thoracique chez tous les patients avec solution de Clagett (polymyxine, neomycine et garamycine)





Vacuum-Assisted Closure Device: A Useful Tool in the Management of Severe Intrathoracic Infections

Alend Saadi, MD,* Jean Yannis Perentes, MD, PhD,* Michel Gonzalez, MD, Adrien Caliera Tempia, MD, Yabo Wang, MD, Nicolas Demartines, MD, Hans-Beat Ris, MD, and Thorsten Krueger, MD

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Vacuum-assisted closure device for the management of infected postpneumonectomy chest cavities

Jean Yannis Perentes, MD, PhD,^a Etienne Abdelnour-Berchtold, MD,^a Jeannine Blatter, MD,^a Alban Lovis, MD,^b Hans-Beat Ris, MD,^a Thorsten Krueger, MD,^a and Michel Gonzalez, MD^a

(J Thorac Cardiovasc Surg 2015;149:745-50)

Risques / complications

- ▣ Hémorragie
- ▣ Protection des voies aériennes !
- ▣ Bronchoaspiration (PR !)

Accelerated treatment of postpneumonectomy empyema: A binational long-term study

Didier Schneider, MD,^a Tomasz Grodzki, MD,^b Didier Lardinois, MD,^a Peter B. Kestenholz, MD,^a Janusz Wojcik, MD,^b Bartosz Kubisa, MD,^b Jaroslaw Pierog, MD,^b and Walter Weder, MD^a

Objective: Postpneumonectomy empyema remains a clinical challenge. We proposed an accelerated therapy without an open chest window 5 years ago. This concept was evaluated on a larger scale in 2 centers in 2 different countries.

Methods: Between July 1995 and October 2005, 75 consecutive patients with postpneumonectomy empyema were treated in Szczecin, Poland (n = 35), and Zurich, Switzerland (n = 40). The therapy consisted of repeated open surgical debridement of the pleural cavity after achievement of general anesthesia, a negative pressure wound therapy of the temporarily closed chest cavity filled with povidone-iodine–

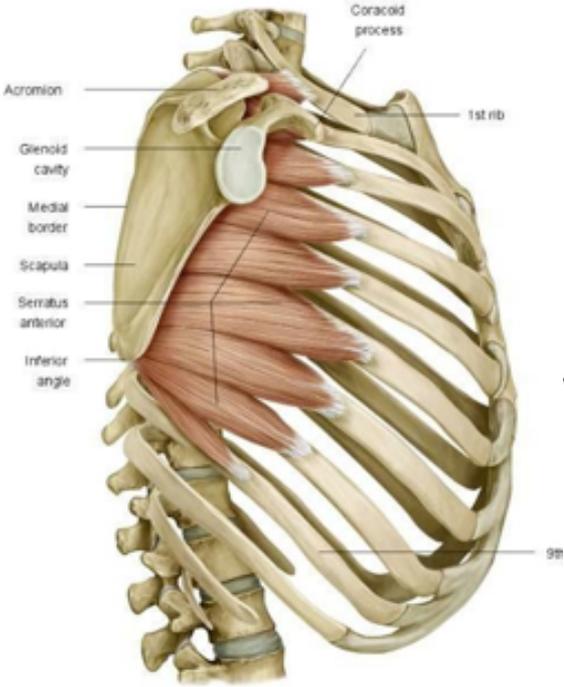
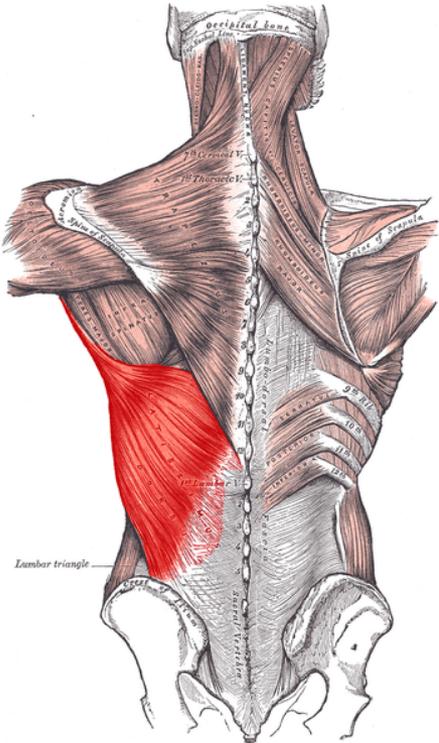
Journal of Thoracic Surgery
doi:10.1016/j.jtcvs.2008.01.036

cleaning of the cavity through a temporary or persistently open window thoracostomy and various modifications for different empyema stages. Furthermore, transposition

Myoplastie de couverture de fistules bronchiques, principes

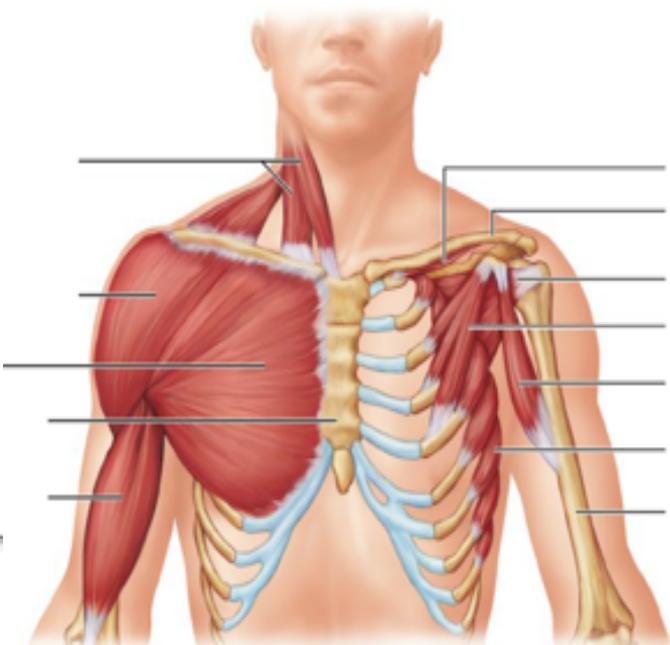
- ▣ Contrôle de l'infection, avivement du moignon bronchique
- ▣ Choix du lambeau musculaire
- ▣ Suture du lambeau au niveau bronchique
- ▣ VAC

Lambeaux thoraciques

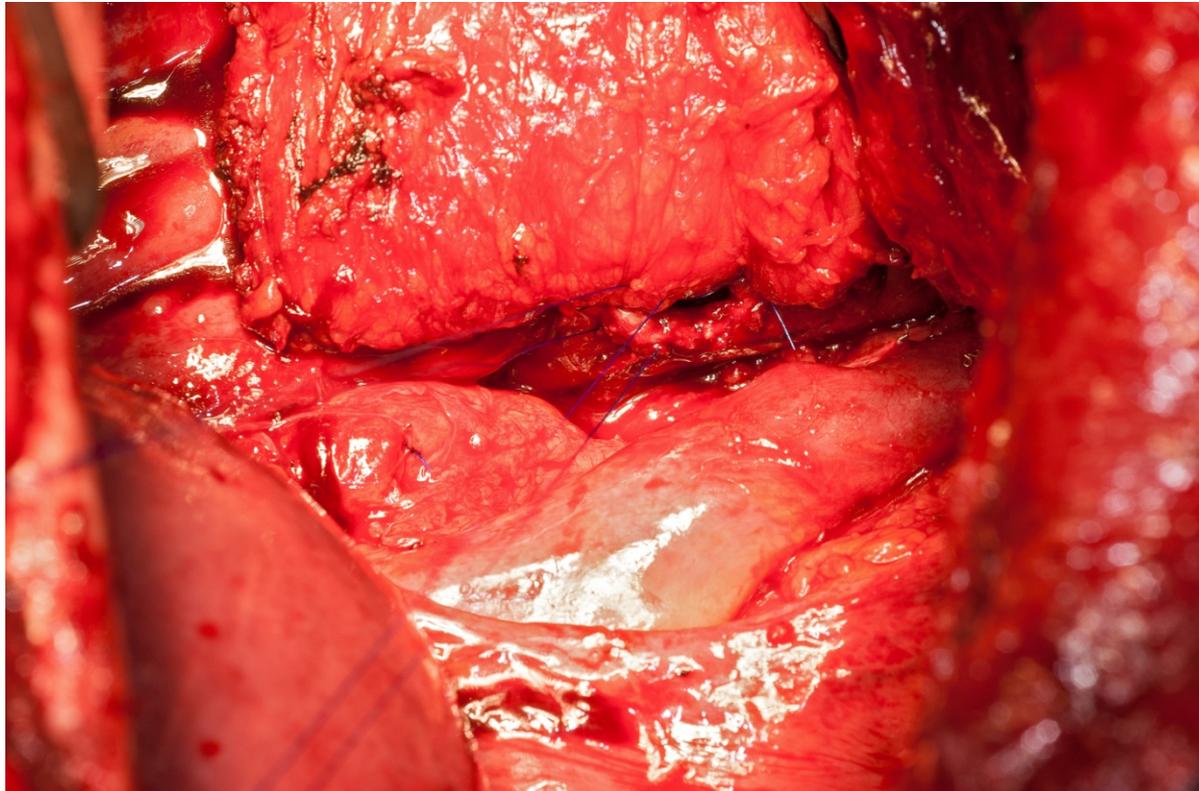


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Illustrator: Karl W



Suture du lambeau



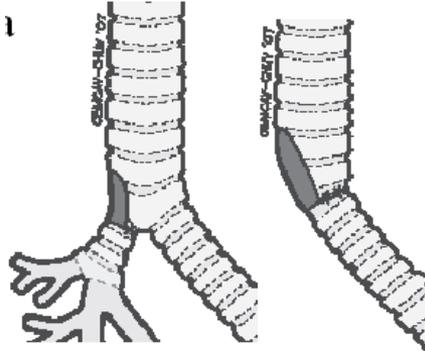
Vue endoscopique (J6)



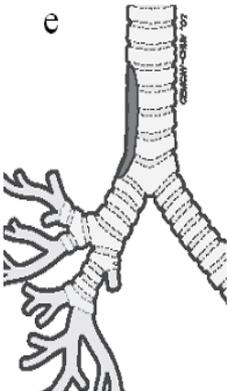
Indications



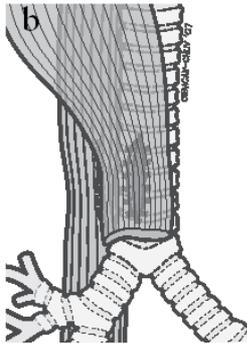
Fistule



Résection
pulmonaire
avec résection
carinal



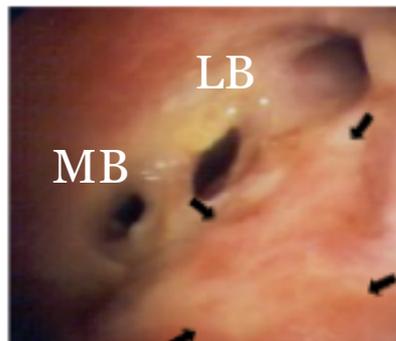
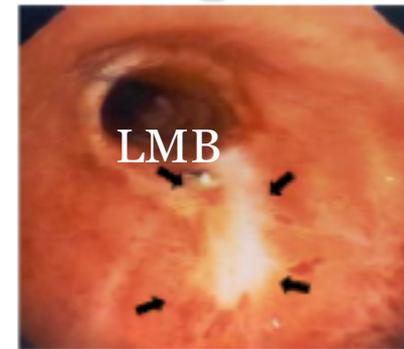
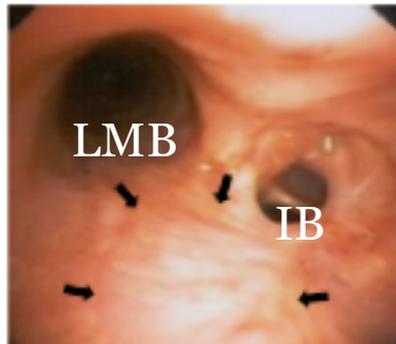
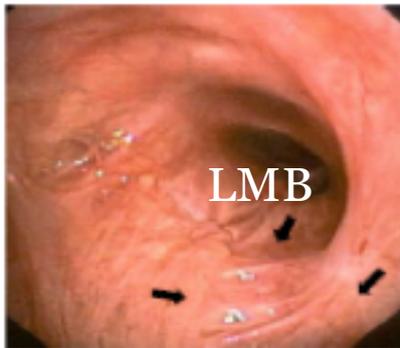
Résection
trachéale



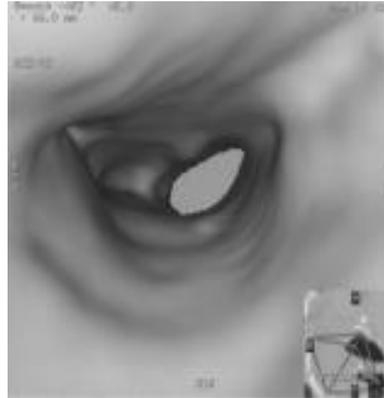
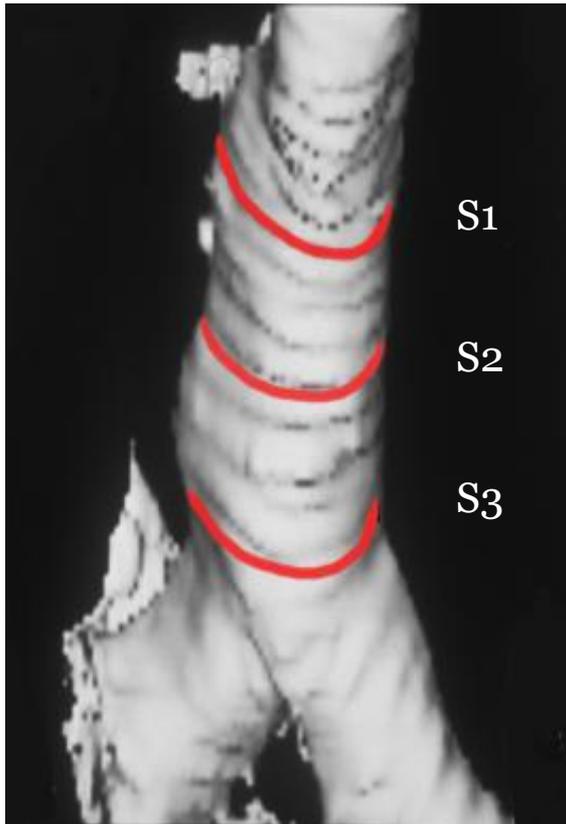
Fistule
oeso
trachéale

Résultats à long terme

- Epithélialisation du substitut trachéobronchique
- Stabilité des reconstructions



Expérience initiale



Endoluminal Cross-Surface Areas (mm ²)	Inspiration	Expiration	Difference	<i>p</i> Value
Above the reconstruction	364 ± 96	318 ± 99	45 ± 21	<i>p</i> > 0.05
At the level of the reconstruction	356 ± 156	280 ± 148	76 ± 23	<i>p</i> > 0.05
Below the reconstruction	348 ± 134	283 ± 111	65 ± 40	<i>p</i> > 0.05



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Closure of Large Intrathoracic Airway Defects Using Extrathoracic Muscle Flaps

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Hans-Beat Ris, MD

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Tracheo-carinal reconstructions using extrathoracic muscle flaps[☆]

Hans-Beat Ris^{a,*}, Thorsten Krueger^a, Cai Cheng^a, Philippe Pasche^b,
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Conclusions

- ▣ Thoracoscopie
- ▣ VAC intra-thoracique
(avec ou sans fistule)
- ▣ Myoplastie
(fermeture d'une fistule)





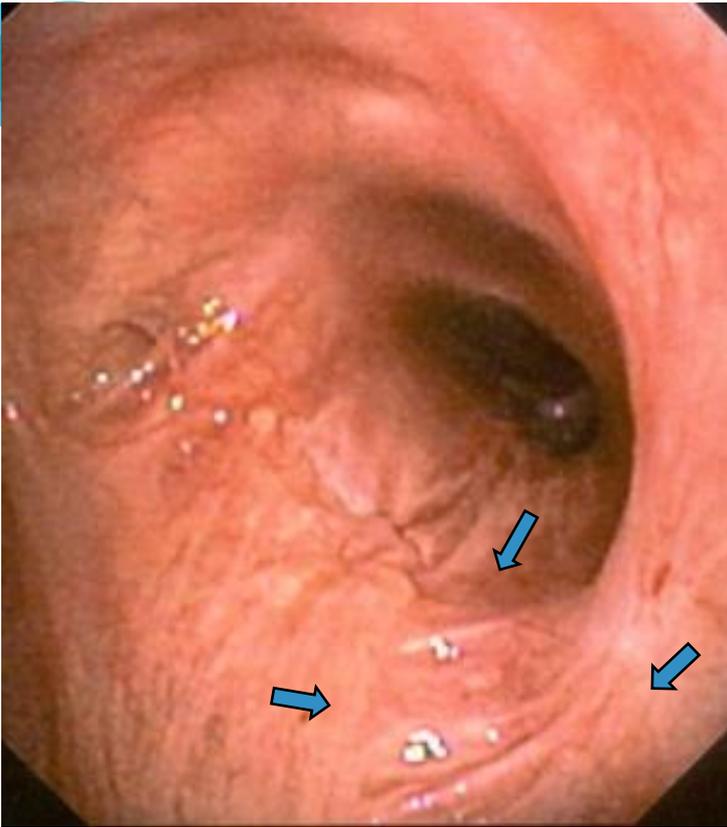
Sténose à J90 (n=2)

▣ Management:

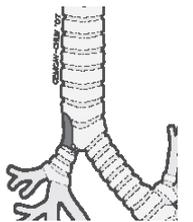
- Spontaneous resolution with observation (n= 1)
- Bronchoscopic dilatation and mitomycin application (n=1)

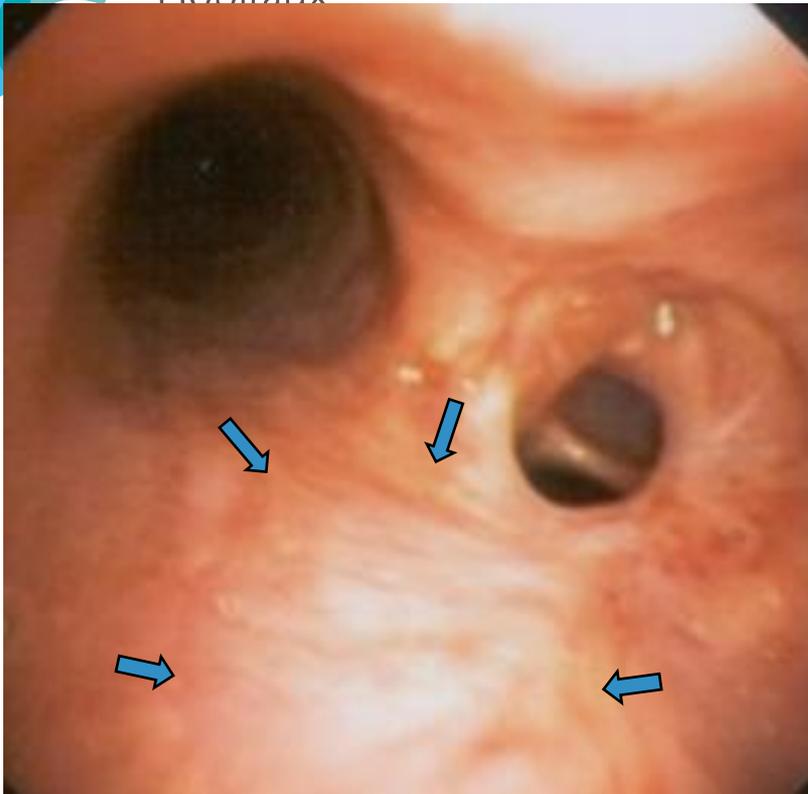
▣ Résultat:

- ▣ **1 cas avec re-sténose à long terme**

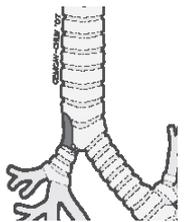


LD closure of tracheal defect after carinal wedge resection and sleeve lobectomy (3 months)



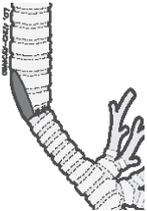


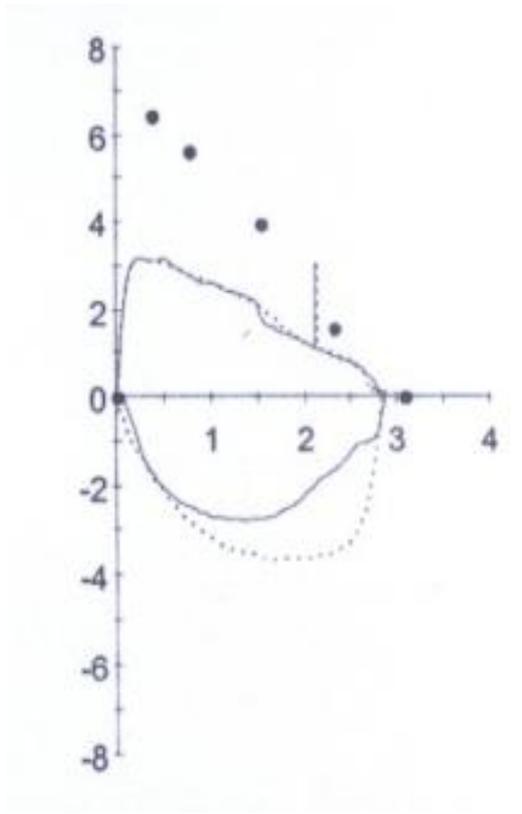
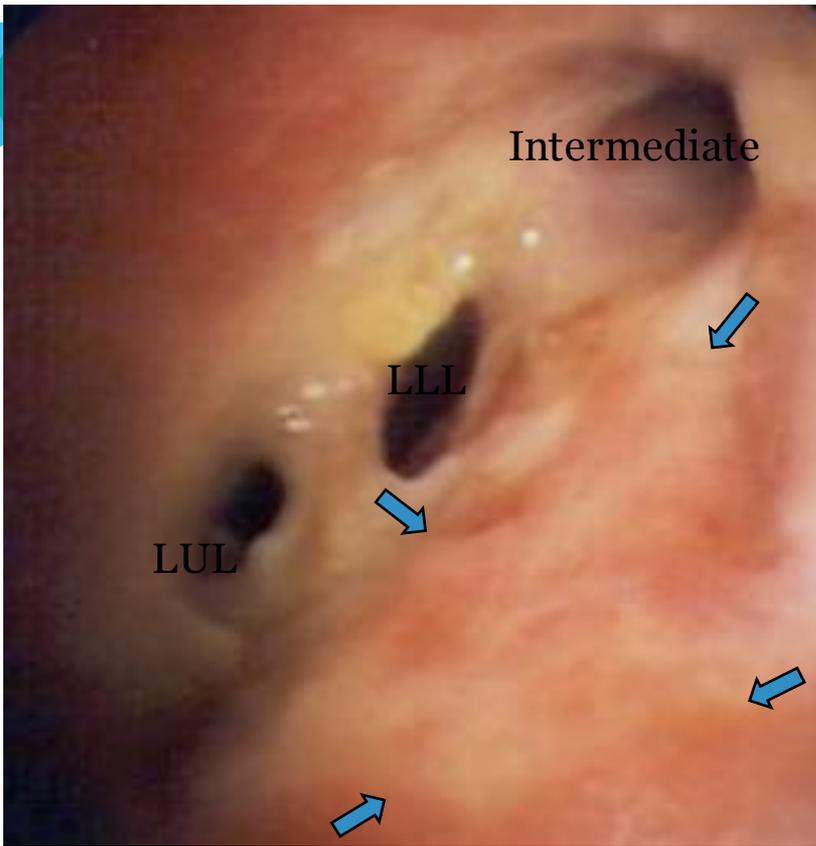
LD closure of tracheal defect after carinal wedge resection and sleeve lobectomy (3 months)



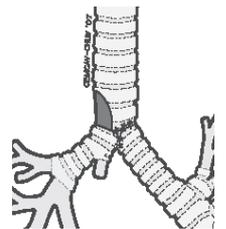


LD closure of tracheal defect after right sleeve pneumonectomy (3 months)





Tracheal defect after carinal resection and RU sleeve lobectomy followed by RT (4 months)



Nécrose musculaire à J90 (N=6 / 68)

□ Traitement:

- Remplacement musculaire (Dentelé/Pectoral, n=5)
- Débridement (n=1)
- VACthérapie dans tous les cas



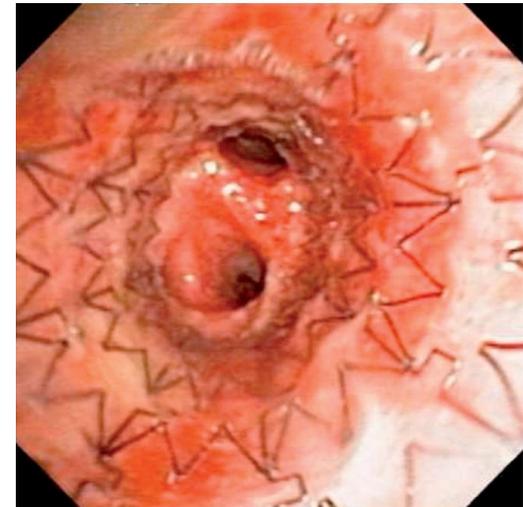
□ Résultats

- favorable
- Pas de déhiscence/sténose à long terme

Déhiscence à J90 (n=4)

▣ Management:

- stents endobronchiques (n=2)
- Re-suture/VAC (n=2)



▣ Résultat:

- ▣ Pas de déhiscence/sténose à long terme