

PLEURESIES SEPTIQUES

Prise en charge thérapeutique, place de la Thoracoscopie

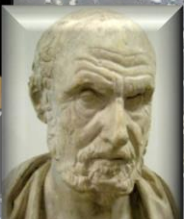
6 novembre 2014

Dr D. METOIS
Chirurgie Thoracique , Pôle Santé Oréliance

Oréliance



Imhotep
- 3000



Hippocrate
- 500



Wilhelm Röntgen
1845 - 1923



Louis Pasteur
1822 - 1895



Evarts Graham
1883 - 1957



?
2014

Antiquité

Moyen Age

**Temps
Modernes**

**Epoque
contemporaine**

.....

-3500

- 476

1453

1789

Oréharce

ETIOLOGIES

Pulmonaires 80%
(pleurésies para pneumoniques)

Pneumopathies
DDB
Abcès pulmonaires

.....

Extra-pulmonaires

ORL, dentaire
Œsophage, médiastinite,
Sous phrénique (abcès et péritonite)
Rétro péritonéale (pyélonéphrite...)

.....

Iatrogènes

Surinfections pleurésies
Post op (cardiaque, thorax,)

EPIDEMIOLOGIE

En augmentation (vieillesse de la population)

Terrain fréquent (responsable de la mortalité)

- **Diabète**
- **Alcool**
- **Toxicomanies**
- **RGO**
- **Maladies pulmonaires chroniques (BPCO...)**
- **Dénutrition**
- **Immunodépressions (corticoïdes ...)**

15 à 20% de décès (UK 2010)

Orchard

J1 J3

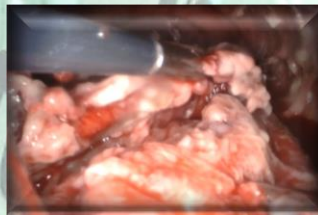
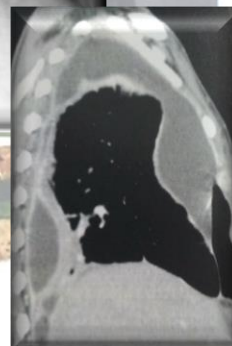
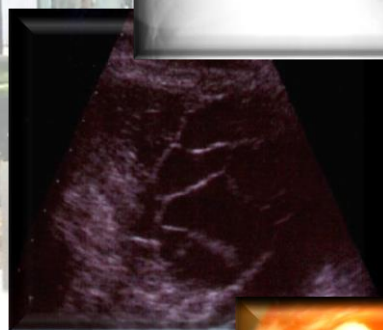
S1 S2

S3 S4

EXSUDATIVE



FIBRINO-PURULENTE



ENKYSTEMENT

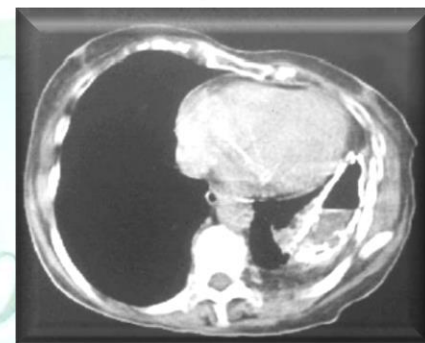
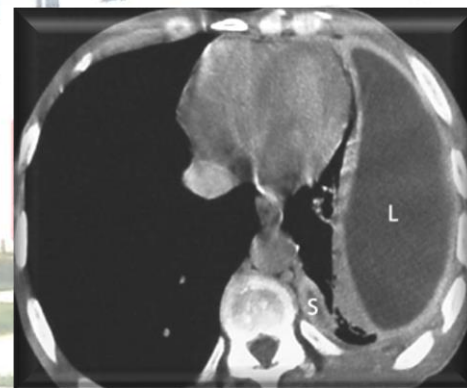


Table 1—Classification and Treatment Scheme for Parapneumonic Effusions and Empyema*

Class 1	Small
Nonsignificant	<10 mm thick on decubitus x-ray
Parapneumonic effusion	No thoracentesis indicated
Class 2	>10 mm thick
Typical	Glucose >40 mg/dL, pH>7.20
Parapneumonic effusion	Gram stain and culture negative Antibiotics alone
Class 3	7.00<pH<7.20 and/or
Borderline complicated	LDH>1,000 and glucose>40 mg/dL
Parapneumonic effusion	Gram stain and culture negative Antibiotics plus serial thoracentesis
Class 4	pH<7.00 and/or glucose <40 mg/dL and/or
Simple complicated	Gram stain or culture positive
Parapneumonic effusion	Not loculated not frank pus Tube thoracostomy plus antibiotics
Class 5	pH<7.00 and/or glucose <40 mg/dL and/or
Complex complicated	Gram stain or culture positive
Parapneumonic effusion	Multiloculated Tube thoracostomy plus thrombolytics (Rarely require thoracoscopy or decortication)
Class 6	Frank pus present
Simple empyema	Single locule or free flowing Tube thoracostomy±decortication
Class 7	Frank pus present
Complex empyema	Multiple locules Tube thoracostomy+thrombolytics Often require thoracoscopy or decortication

CHEST

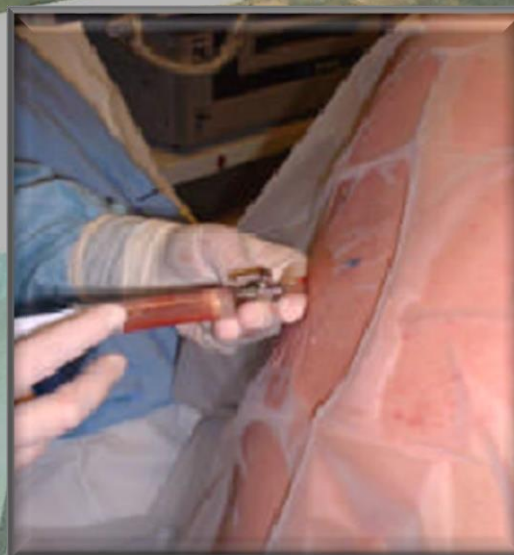
Official publication of the American College of Chest Physicians



A New Classification of Parapneumonic Effusions and Empyema

Richard W. Light

Chest 1995;108:299-301
DOI 10.1378/chest.108.2.299



TRAITEMENTS

Antibiotiques

Kinésithérapie respiratoire précoce (1 à 3 mois)

Apport nutritionnel (Hypo albuminémie péjorative)

Prophylaxie anti thrombotique

Drainage pleural

Fibrinolytique

Chirurgie

ANTIBIOTIQUES



Table 1 Bacteriology of community-acquired and hospital-acquired pleural infection²

	Common organisms
Community-acquired	<i>Streptococcus</i> spp. (~ 52%) ▶ <i>S. milleri</i> ▶ <i>S. pneumoniae</i> ▶ <i>S. intermedius</i> <i>Staphylococcus aureus</i> (11%) Gram-negative aerobes (9%) ▶ Enterobacteriaceae ▶ <i>Escherichia coli</i> Anaerobes (20%) ▶ <i>Fusobacterium</i> spp. ▶ <i>Bacteroides</i> spp. ▶ <i>Peptostreptococcus</i> spp. ▶ Mixed
Hospital-acquired	<i>Staphylococci</i> ▶ Methicillin-resistant <i>S. aureus</i> (MRSA) (25%) ▶ <i>S. aureus</i> (10%) Gram-negative aerobes (17%) ▶ <i>E. coli</i> ▶ <i>Pseudomonas aeruginosa</i> ▶ <i>Klebsiella</i> spp. Anaerobes (8%)

Etude multicentrique UK
434 pleurésies purulentes

**Culture négative dans
40%**

**Pénicilline + B lactamase
Ou
Céphaslosporine 2^e ou 3^e G
+ imidazole**

3 à 6 semaines

Idem + Vancomycine

FIBRINOLYTIQUES

Intérêts Historiques



Réduction Intervention chirurgicale

Amélioration radiologique

Réduction du délai d'hospitalisation

Diminution de la mortalité

Oréaliance

FIBRINOLYTIQUES

Intérêts Objectifs



The NEW ENGLAND JOURNAL of MEDICINE

ESTABLISHED IN 1820 MARCH 3, 2005 VOL. 352 NO. 9

U.K. Controlled Trial of Intrapleural Streptokinase for Pleural Infection

Nicholas A. Maskell, M.R.C.P., Christopher W.H. Davies, M.D., Andrew J. Nunn, M.Sc., Emma L. Hodley, Fergus V. Gleeson, F.R.C.P., Robert Miller, F.R.C.P., Brian Gabe, M.Phil., Glyn L. Rees, Timothy E.A. Peto, F.R.C.P., Mark A. Woodhead, F.R.C.P., Donald J. Lane, F.R.C.P., Janet H. Dartyshire, M.B., Ch.B., and Robert J.O. Davies, D.M., for the First Multicenter Intrapleural Streptokinase Trial (MIST1) Group*

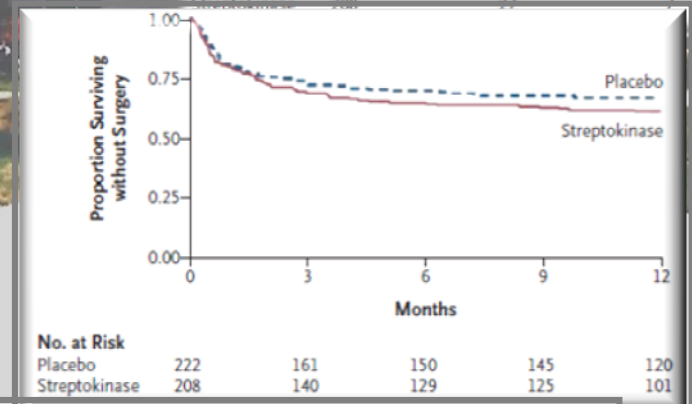
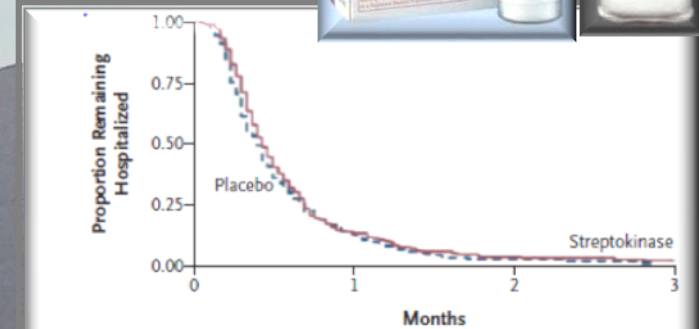
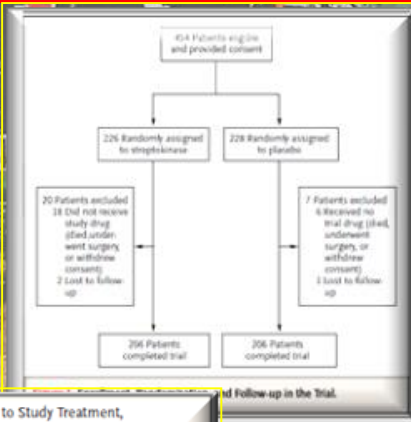


Table 2. Adverse Events Possibly Attributable to Study Treatment, According to Severity and Type.

Variable	Streptokinase (N=208)	Placebo (N=222)	Relative Risk (95% CI)*	P Value
no. (%)				
Severity				
Serious	14 (7)	6 (3)	2.49 (0.98–6.36)	0.08
Other	8 (4)	8 (4)	1.07 (0.41–2.81)	0.91
Total	22 (11)	14 (6)	1.68 (0.88–3.19)	0.15
Type				
Hemorrhage (local pleural or systemic)	7 (3)	6 (3)		
Chest pain	4 (2)	1 (<1)		
Fever, rash, and allergy	5 (2)	1 (<1)		
Other	6 (3)	6 (3)		

Table 3. Outcomes on Chest Radiography at Three Months.*

Outcome	Streptokinase	Placebo	Difference between Groups (95% CI)	P Value
Residual pleural thickening at lateral chest wall — mm†	12±14	15±19	3 (–1 to 7)	0.20
Vertical height of thorax on affected side — mm†	209±30	221±33	12 (4 to 19)	0.003
Improvement in the area of pleural-fluid opacity in patients not requiring surgery — no. (%)‡				0.30§
No. of patients	102	133		
0–25%	7 (7)	12 (9)		
26–75%	6 (6)	12 (9)		
76–90%	12 (12)	24 (18)		
>90%	77 (75)	85 (64)		



Intrapleural Fibrinolytic Agents for Empyema and Complicated Parapneumonic Effusions*

A Meta-analysis

Yasuharu Tokuda, MD; Dai Matsushima, MD; Gerald H. Stein, MD; and
Seishiro Miyagi, MD, PhD



Table 1—Design of Trials Included in the Meta-analysis*

Trial, Year	Patients Eligibility	Enrolled, No.		Male, %		Mean Age $\pm$ SD, yr		Chest Tube Size, Fr	Fibrinolytics	Treatment Dose per Day, IU	Duration, d
		TG	CG	TG	CG	TG	CG				
Davies et al, ⁶ 1997	PE or CPE	12	12	75	67	62 $\pm$ 23	60 $\pm$ 23	14	Streptokinase	250,000	3
Bouros et al, ⁷ 1999	PE or CPE†	15	16	73	81	54‡	57§	28 to 32	Urokinase	100,000	3
Tuncozgun et al, ¹⁹ 2001	PE stage II‡	24	25	83	72	34 $\pm$ 14	33 $\pm$ 16	24 to 36	Urokinase	100,000	5
Diacon et al, ⁵ 2004	PE or CPE	22	22	82	68	40 $\pm$ 13	40 $\pm$ 14	24 or 28	Streptokinase	250,000	up to 7
MIST1, ⁸ 2005	PE or CPE	208	222	67	72	60 $\pm$ 18	61 $\pm$ 18	12 (12 to 20)¶	Streptokinase	500,000	3

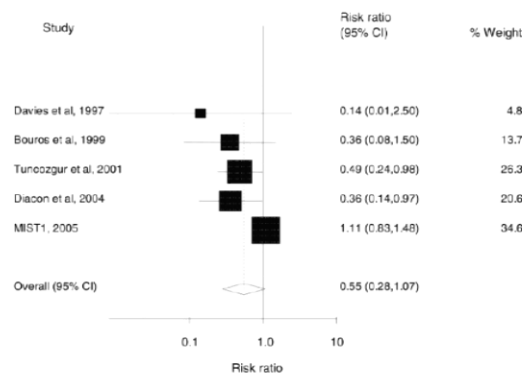


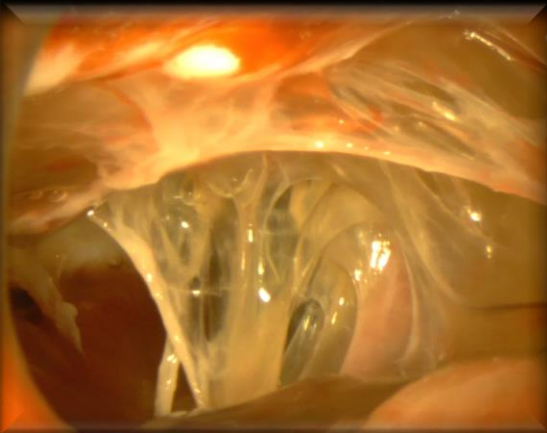
FIGURE 2. Mortality and the need for surgery in trials comparing intrapleural fibrinolytic agents with placebo for treatment of empyema and complicated parapneumonic effusion.

FIBRINOLYTIQUES

Intérêts Pratiques



« L'absence de preuve n'est pas la preuve de l'absence »

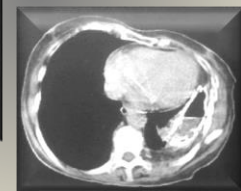
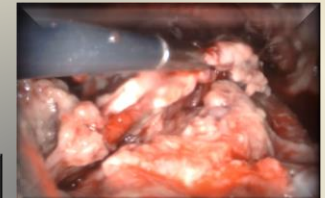
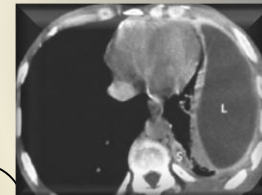


**Elle doit être pour les stades précoces
Ne doit pas faire retarder une toilette chirurgicale
Augmente la perméabilité du drain**

**1/3 d'une ampoule + 30 ml NaCl x 3/j
Clampage du drain pendant 2 heures**



?



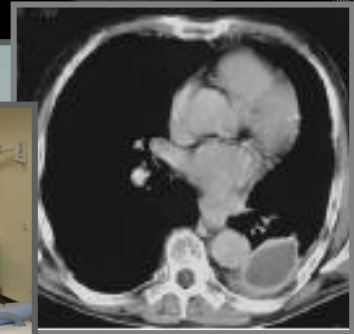
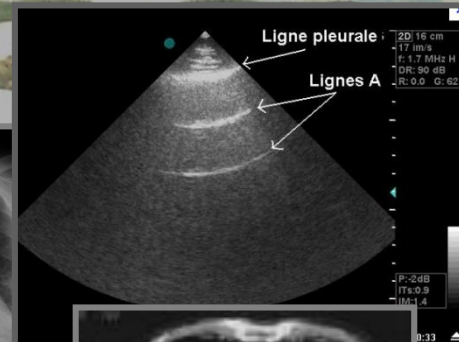
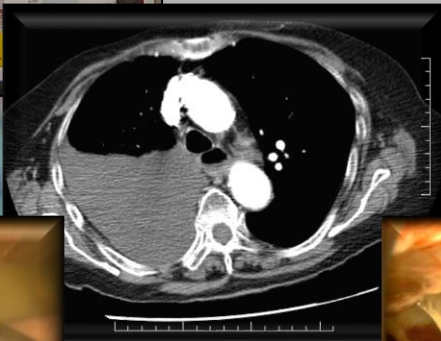
DRAINAGE PLEURAL ASPIRATIF

**Pas de consensus sur le matériel, la taille
ni la meilleur procédure**

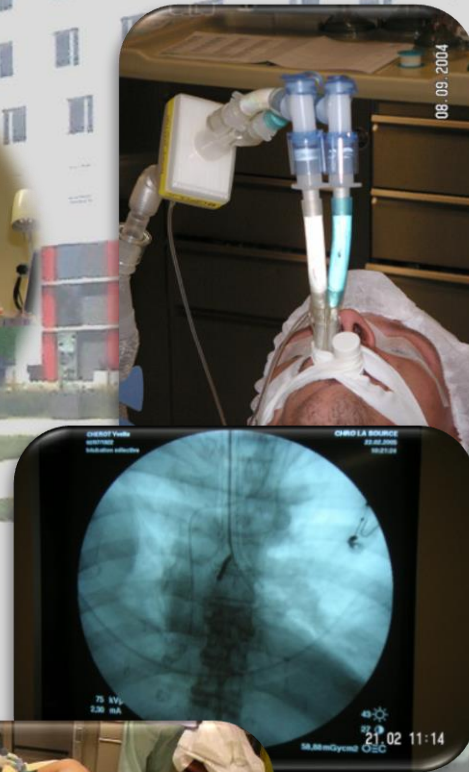
« Celui qui sait le faire

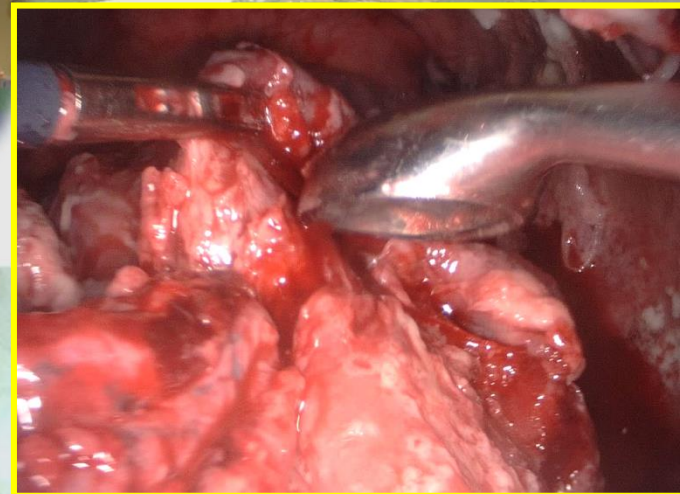
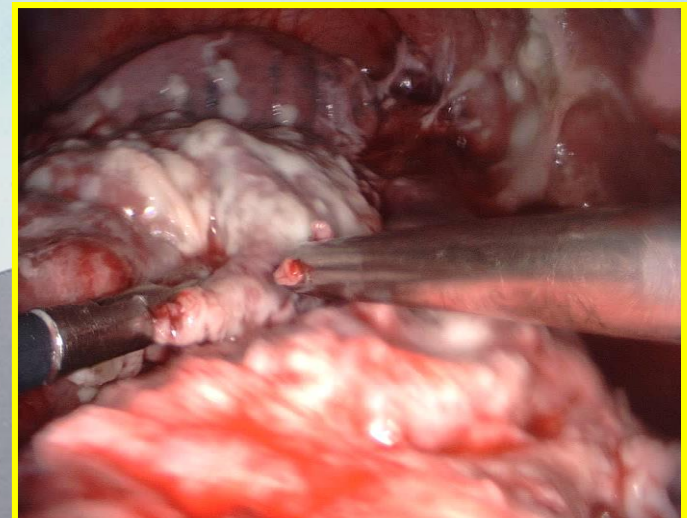
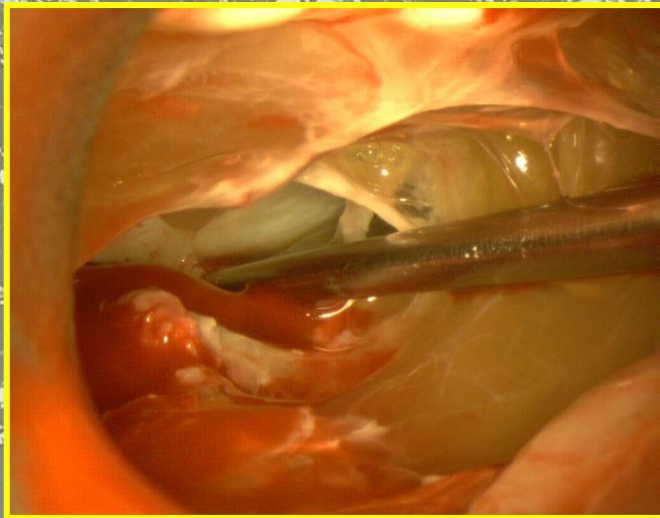
Et

qui sait le surveiller »



THORACOSCOPIE





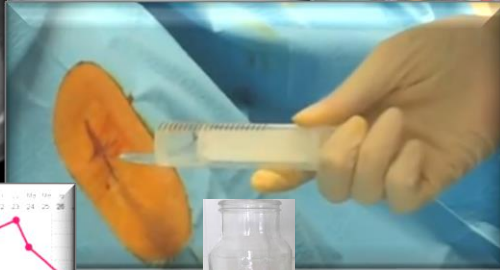
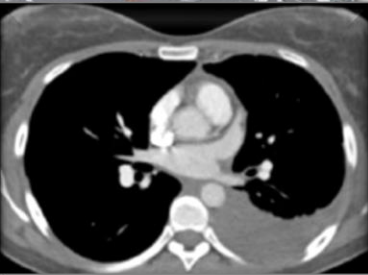
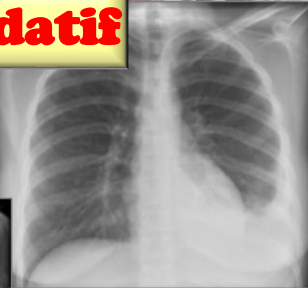
Orelance

THORACOSCOPIE

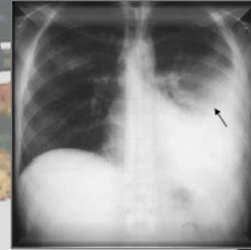
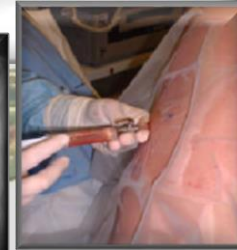
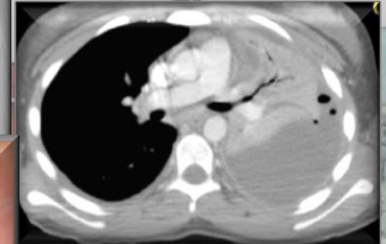
Indications



Stade exsudatif



Stade fibrinopurulent ou empyème



Hospitalisation

Traitement antibiotique IV

Kinésithérapie respiratoire

Traitement antithrombotique

Surveillance quotidienne

Drainage pleural ?

Thoracoscopie si aggravation

TOILETTE THORACOSCOPIQUE

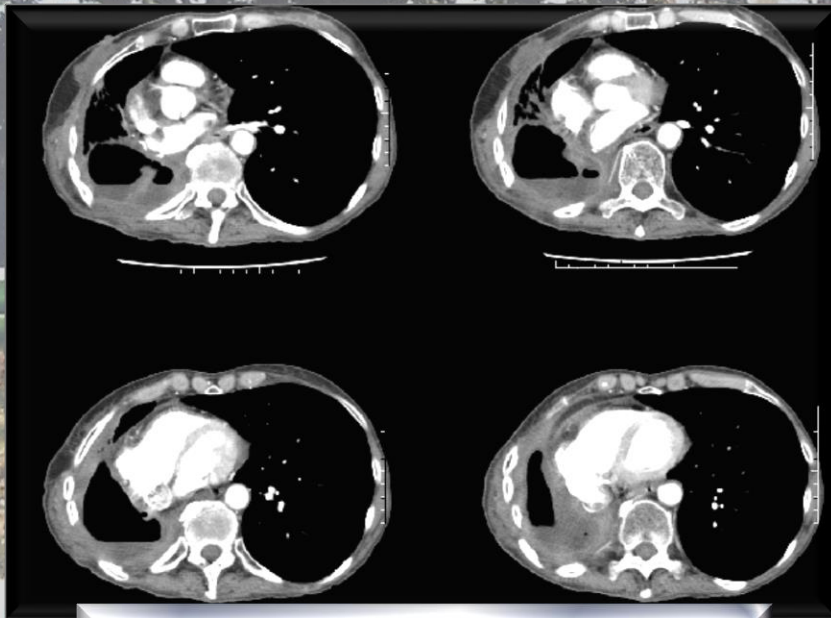
reliance

THORACOSCOPIE

Indications



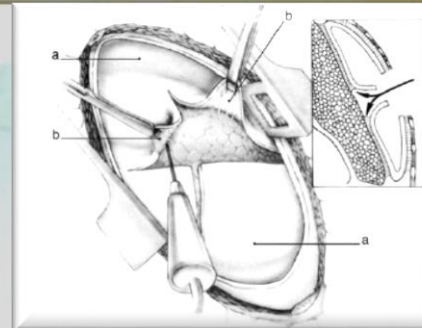
Stade enkystement



Thoracoscopie 1^{ère}



Décortication fréquente



Oréliance

THORACOSCOPIE

Justifications



Tableau VII. – Chronologie des publications rapportant des séries de pleurésies purulentes traitées par vidéothoroscopie.

Auteurs	Années	Nombre de PP	PPPP	Évolution préopératoire (jours)	Stade	Geste	Durée (jours)		Succès (%)	Thoraco- conversion (%)	Complications (%)	Décès (%)
							Drainage	Hospitalisation				
Ridley et Brainbridge [86]	1991	18	14	np	II/III	Évacuation Irrigation	10	np	33	44	np	11
Sendt et al [93]	1995	10	7	np	np	Évacuation Lavage	8,5	16,3	100	0	10	0
Landreneau et al [49]	1995	76	47	9	II/III	Évacuation	3,3	7,4	83	17	3	6,6
Homick et al [41]	1996	14	14	23,7	II	Évacuation	np	7,8	71	29	7	0
Angelillo-Mackinlay et al [7]	1996	31	31	11	II	Évacuation	4,1	6,7	90	10	16	3
Wait et al [115]	1997	11	11	np	II	Évacuation	5,8	8,7	91	0	0	9
Striffeler et al [103]	1998	67	44	< 21	II	Évacuation	4,1	12,3	72	28	4	4
Cassina et al [18]	1999	45	39	37	II/III	Évacuation Irrigation	7,1	10,7	82	18	11	0
Lackner et al [46]	2000	17	15	7	II	Évacuation Mobilise le poudmon	7	11	66	24	25	0
Cunriffe et al [24]	2000	10	8	73	II/III	Évacuation Ablation plèvre viscérale	4,5	11	100	0	np	0
Waller et Rengarajan [114]	2001	36	36	53	II/III	Évacuation mobilise le poudmon	np	5,5				
Cheng et al [20]	2002	10	10	28	II	Évacuation	9,7	15				

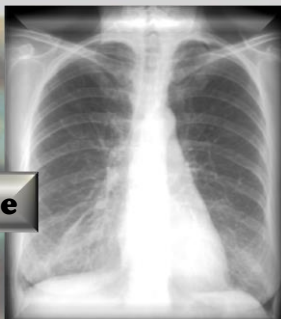
Réduction de l'hospitalisation

Amélioration clinique et radiologique rapide

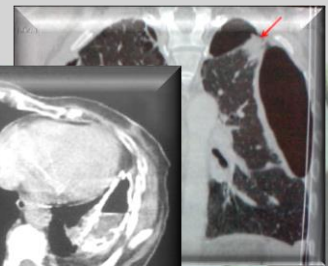
Diminution des séquelles



S2 post thoracoscopie



M3 post thoracoscopie



Oréaliance

CONCLUSIONS

Pathologie multidisciplinaire

**Pneumologues, Chirurgiens, Anesthésistes
Infirmières, Radiologues, Kinésithérapeutes,
Diététiciennes, Réanimateurs...**

Coopération active et réactive

**Indication large et précoce
de la thoracoscopie**



Oréaliance