

# Chemical Pleurodesis in Malignant Pleural Effusion (MPE)

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## Introduction

Chemical pleurodesis or Talc Poudrage (TP) is one of therapeutic options of MPE performed under medical thoracoscopy and which has as objective, the pleural symphysis and the drying of the pleural effusion.

## Goal

Study the efficacy and safety of chemical pleurodesis in MPE

## Methods and Materials

Prospective study over three years (2012-2015) including 46 patients with a proven or recurrent MPE with macroscopic features suggestive of neoplasia but systematically followed by biopsies. The TP was carried out under TM (photo 1+2) and we used talc steril and the cyclines(photo 3+4), we did not make the comparison between the two products. 82,5% under local anesthesia(LA) and 17.5% LA + mild sedation (Tab3). End examination by evaluation of diffusion of talc(photo 5+6) and pleural drainage.



Photo 1. Rigid thoracoscope VA.



Photo 2. Pear for poudrage.



Photo 3: Uniportal + poudrage



Photo 4: Kit of steril talc

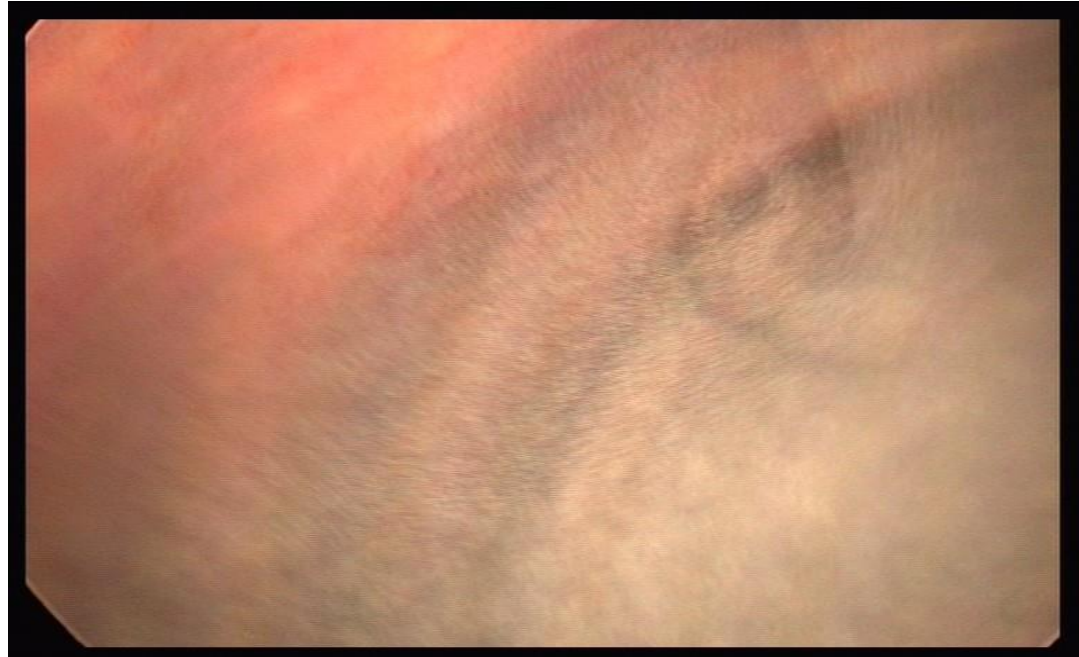


Photo 5: Snow storm

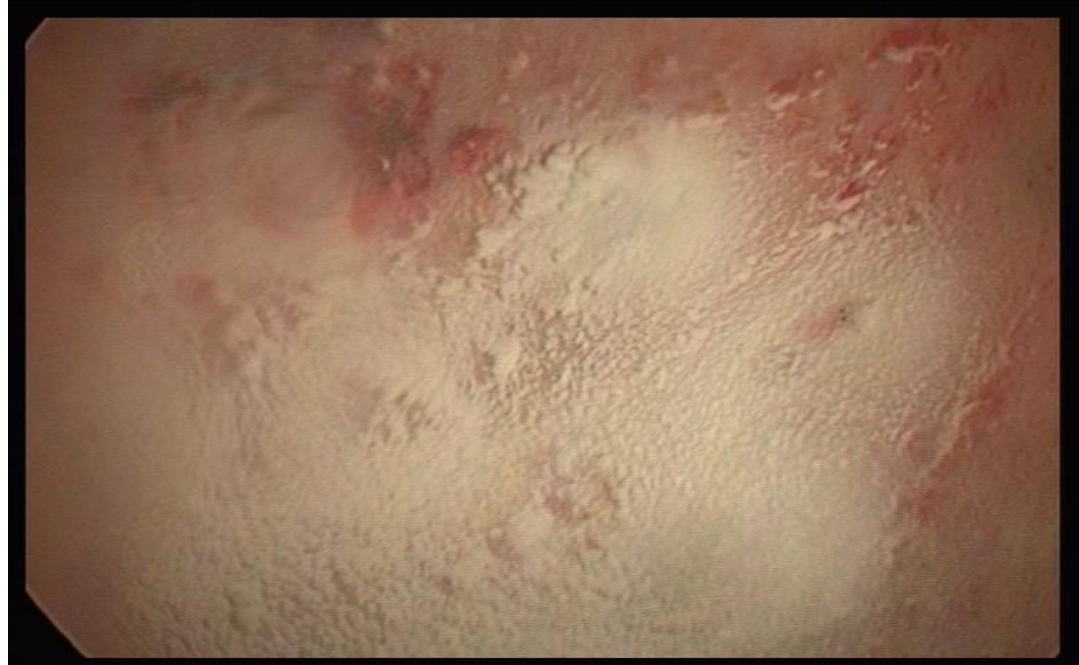


Photo 6: Talc diffusion

## Results

52% women and 48% men were included aged from 26 to 82 years with an average of 56.34 y. The neoplastic history was found in 76%, 24 % haven't neoplastic history. The breast cancer in 35%, lung in 15%, pleural mesothelioma in 7%,others in 20% (Tab 1;3). Good diffusion is found in 87% against 13%, a pleural drainage is applied which lasted less than 5 days in 9% ; 5 days in 87% ; 5 to 10 days 2%; more than 11days 2%.(Tab 3)

Final Diagnostic	Number	%
Beast	16	35
Lung cancer	15	33
Mesothélioma malignant	4	9
Sarcoma	3	7
Adénocarcinoma inknown	2	4
Ovarian	3	7
Mélanoma	1	2
Vessie	1	2
NS Inflammato	1	2
Total	46	100

Effectiveness of pleural poudrage	VIALAT [146] N= 360	RODRIGUEZ-PANADERO [275] N= 168	Our study N=46
30 Days	88.5%	92.8%	85.5%
60 Days	-----	-----	80,5%

Tab 2: Pleurodesis

Tab 1: Effectiveness TM vs Biopsies+cytology

The post operative complications are: empyema 2%, air laking 17.5%, fever 10.5%,subcutaneous emphysema 4%. No distress respiratory syndrome no death (Tab 4) Controlling at 30 days 85.5% pleurodesis success, at 60 days 80.5% of success. (Tab 2)

## Discussion

Despite the reduced workforce In our study we note a female predominance with 52%. History of breast cancer in 35% of cases followed by pulmonary cancer in 15%, mesothelioma, ovarian and sarcomas in 7% for each. 24% (11 cases) with no previous history of neoplasia benefited from a first-line pleurodesis for macroscopic tumor appearance similar to the literature . Local anesthesia demonstrates that it's sufficient to perform the procedure In 80% of the sterile talc was used in spraying and only in 20% of the cyclines. The drainage is systematic it was maintained 05 days in 87% of the cases. Our series has demonstrated, in the same way as the literature series, the safety of pleural powdering. 84% (37/46) of pleural symphyses were obtained during the first month and 81% of success in 60 days.

Procédure of poudrage	SOTIM [206] N= 558	F.R-PANADERO [271] N= 168	Our study N=46	Complications	F.R,PANADERO [271] N= 411	KOLSCHMANN [ 278] N= 102	Our study N= 46
Age average	64 ans	62 ans	56.34				
Gender	M 51% F 49%	48% 52%	48% 52%	Pain	10.5%	80%	21.5%
Type of Anesthesia	Locale 78% Sédation 22%	100% -----	82.5% 17.5%	Fever	-----	28.4%	10.5%
Portal number	1 issue 77% 2 issues 23%	100% -----	100% -----	Empyema	1.9%	1%	2%
Product	Talc 4gr	Talc 5.6gr	80%Talc 5 gr 20% cyclines	sub cutaneous emphysema	9.4%	0%	4%
Cancers :				Bleeding	0.7%	0%	0%
Lung	43%	29%	33%	Prolonged Bullage	3%	1%	17,5%
Breast	22%	20%	35%	ARDS	0.2%	0%	0%
Mesothélioma	15%	15%	9%	Death	0%	0%	0%
Urogénital	6%	----	9%				
Lymphoma	3%	8%	----				
Digestive	3%	-----	----				
Mélanoma	2%	-----	2%				
Inkknown	3%	7%	4%				
Dé drainage	4 jours	5 jours	5 jours				

Tab 3: Procedures

Tab 4: complications

## Conclusions

Chemical pleurodesis is a palliative treatment very effective and without risk for the patient against recurrence of effusion, dyspnea, and pain in MPE.

Conflict of interest: No conflicts

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