

Medical Thoracoscopy(MT) in Malignant Pleural Effusion (MPE)

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Introduction

MT is a minimally invasive procedure performed by a team trained in the diagnosis of MPE. Its interest is greater when it comes to a malignant etiology because of the particularity of the locations of the lesions but also the rapidity of the diagnosis.

Its systematic indication with or without neoplastic context with a palliative therapeutic contribution in complete safety will be presented in this prospective study which was spread over 03 years involving 120 patients. In the presence of pleurisy, the use of pleural aspiration followed by a needle biopsy is often part of a practiced diagnostic approach. However, the yield diagnosis of these latter remain in the MPE.



Photo 3

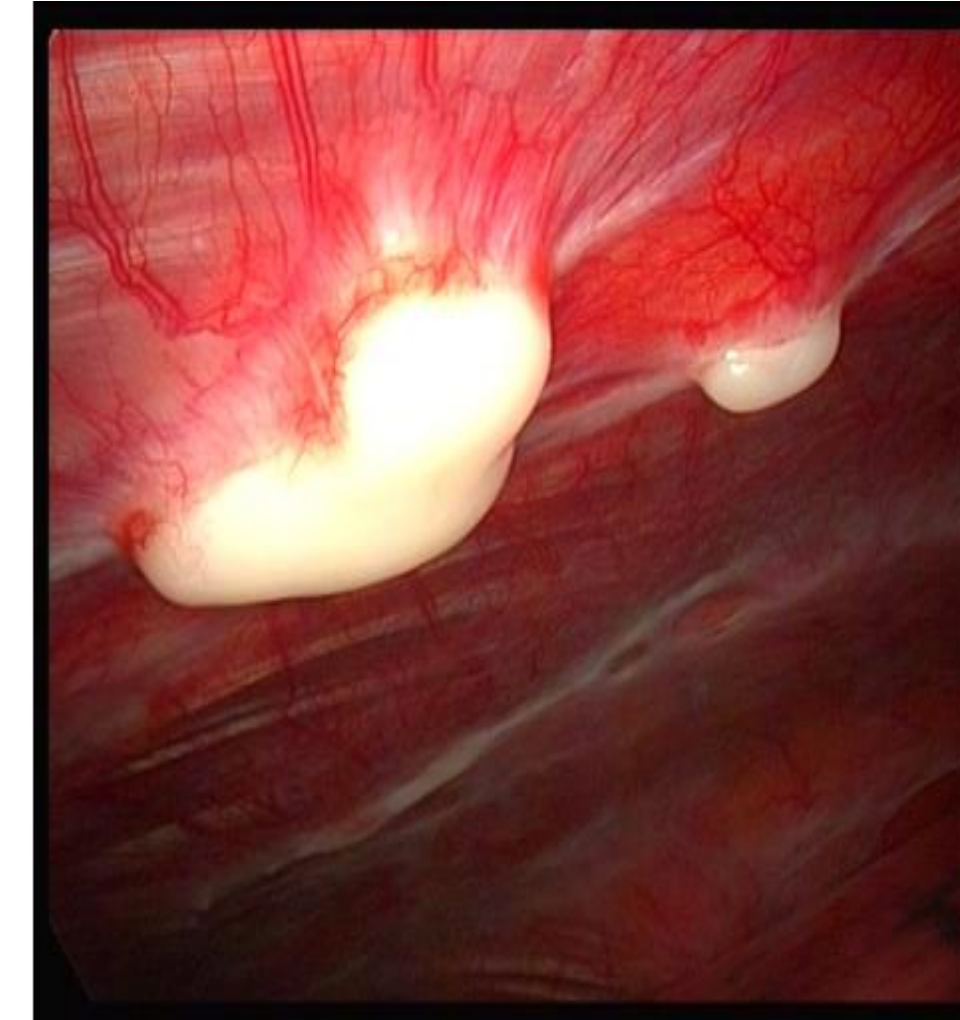


Photo 4

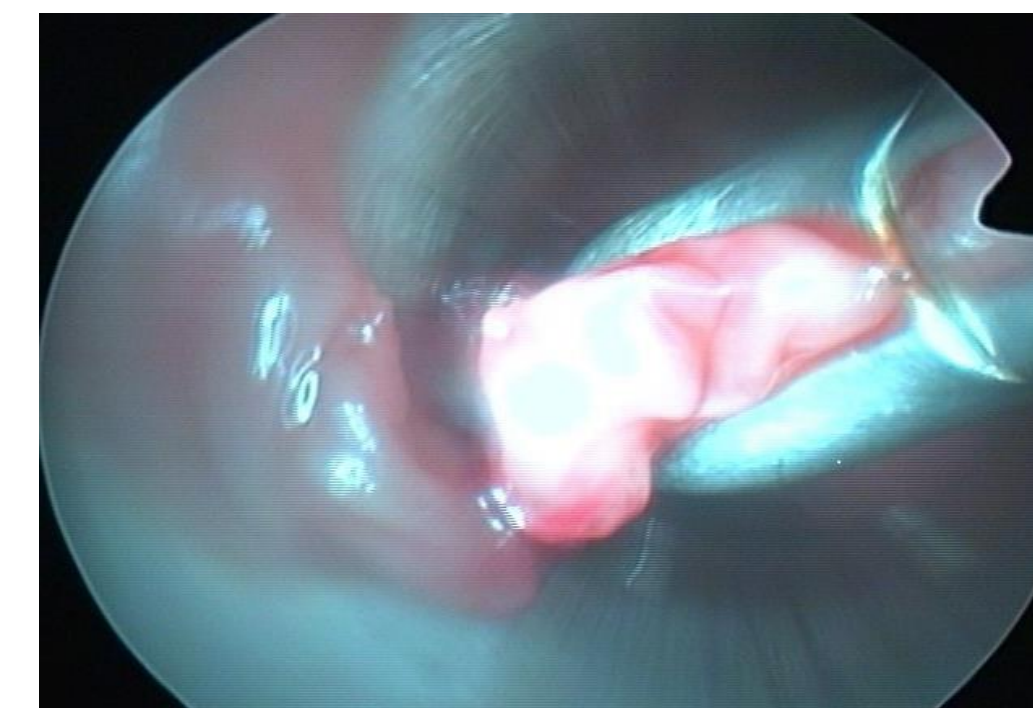


Photo 5

Methods and Materials

A three-year prospective study in 120 patients admitted for a diagnostic problem of recurrent pleurisy despite multiple pleural needle biopsies and cytological examinations, evolving in a neoplastic or non-neoplastic background and/or the presence of a background asbestos exposure (Chart 1). 18 year age and more are include with PS less than 2, without contraindication. 04 patients were excluded.

A MT video-assisted is performed, a single portal of entry under local anesthesia or conscious sedation and biopsies are performed after a large examination of pleura cavity (Photo 1+2)

Rigid thoracoscope is used in total aseptic conditions (Photo 1 + 2). The examination is completed by the total aspiration of fluid and air. Any incident or accident is noted during and after the operation.



Photo 1. Rigid thoracoscope VA.



Photo 2. Uniportal entry.

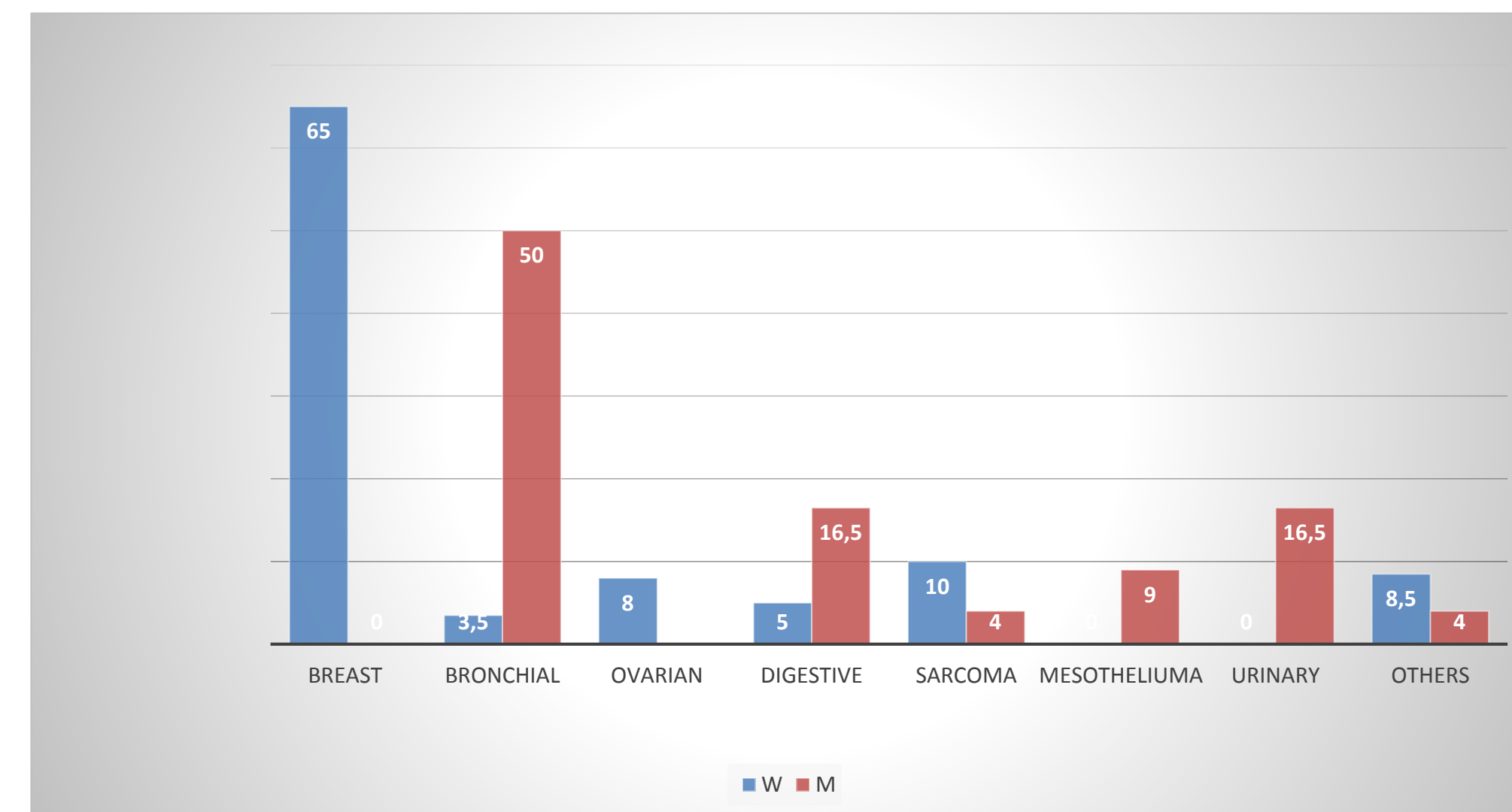


Chart 1: Neoplastic history

Results

A. patient-related data:

116 patients (62 men and 54 women) underwent thoracoscopy, the average age was 58.75 years with extremes between 26 and 83 years.

Smoking trace was found in 67% of men and in only one woman.

Knowing that, 52% of our patients already had a neoplastic history (Chart 1)

B. data related to the technique:

Diagnostic indications for thoracoscopy account for 75% of our series, followed by therapeutic indications in (18%) and both of them in 7% of the cases.

Mild sedation along with local anesthesia was applied in 14 patients. In 102 patients, local anesthesia alone was enough. Among the macroscopic aspects, 68% of the the masses and nodules evoked a malignant aspect and 26.7% of non-specific thickenings of pleura (Photo 3,4), we realized an average of 07 biopsys of good qualitys in our series.(photo 5)

Cost-effectiveness	Cytology	Needle biopsie	Thoracoscopy
Positive +	37	50	115
Negative -	81	130	1
Total	118	180	116
positive/total	32%	27,80%	99%
Ratio +/-	0,45	0,38	115

Tab 1: Effectiveness TM vs Biopsies+cytology

Complications	F.PANADERO N= 411	Our series N= 116
Pain	10.5%	17%
Empyema	1.9%	2%
Sub cutaneous	9.4%	4%
Emphysèma		
Hémorragie	0.7%	0%
Bullage	3%	17.5%
Death	0%	0%

Tab 2: Complications

The duration of the operation was on average 19 minutes with extremes of 08 and 40'. In 91.4% of the patients the drain was removed in less than 5 days and in 8.6% needed more than 6

C. Incidents, complications and cost-effectiveness:

No perioperative incidents observed in 73% of our patients. In 17% of the cases, pain was the most observed inconvenience mainly during the biopsies. No major postoperative complications were observed, 96.5% of the patients had shown zero complications (Tab 2). 100 patients out of 116 are diagnosed histologically as cancerous (86% of the population). The effectiveness of thoracoscopy in the diagnosis of malignant pleurisy is significantly higher (99%) than other conventional techniques, even if they are repeated (Tab 1). Hitological data was, lung cancer in 35%,breast 24%,mesothelioma 13%, others 28%.Origin of unknown carcinoma was discover in 42.2% by MT and immuno-histo-chemistry study.

Discussion

Our study shows that MPEs are observed in subjects over the age of 60 in men (bronchial cancers) and younger in women (breast cancer) as cited in all the literature.

The technique and procedures of MT used are same (2;4).

The results obtained are dominated by lung cancer metastases followed by breast cancer and mesothelioma (Tab 3). (1,2,3)

The diagnostic efficiency is 99% in our series.(1)

Regarding the complications, there is a slight increase in pain and prolonged bubbling.(2;3,4)

No death has been noted.(1;2;3)

Résultats	DUTEAU N=122	LODENKEMPER N= 556	Our study N=100
Bronchial	46%	24%	35%
Breast	19%	18%	24%
Mésothélioma	----	14.5%	13%
Urogénital	----	4.8%	5%
Digestive	----	3.2	3%
Lymphomas	----	9.1%	4%
Sarcoma	----	----	3%
Mélanoma	6.5%	----	2%
Unknown	----	11%	9%
Others	16.4%	10%	2%

Tab 3: Results

Conclusions

MT in the diagnosis of MPE is very effective, safe and innocuous

Conflict of interest: No conflicts

Key words: Medical thoracoscopy, malignant effusion,efficiency;safety

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