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# THORACIC SURGERY

ORAL COMMUNICATIONS



## SELECTED ORAL COMMUNICATIONS FOR THE EDUARDO ESTEVES PINTO AWARD

### THORACIC SURGERY - SELECTED ORAL COMMUNICATIONS

# OUTCOMES OF 500 CONSECUTIVE UNIPORTAL VIDEO-ASSISTED LOBECTOMIES

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#### Objectives

We present the outcomes of 500 consecutive uniportal video-assisted lobectomies performed at our department.

#### Materials and Methods

Between November 2013 and July 2020, 500 lobectomies (malignant lesions: 468 cases, benign lesions: 32 cases) were performed. The patients' demographics, approach and type of surgery, postoperative morbidity and mortality were analyzed.

#### Results

Demographical data are as follows: 216 female/284 male, mean age: 63 years (range: 16-85 years). All surgeries began by a single-port VATS approach, being necessary conversion to mini-thoracotomy in 45 procedures (conversion rate of 9%) due to bleeding and/or technical difficulties. The resected lobes showed the following distribution: right upper: 167, mid lobe: 33, right lower: 82, left upper: 111, left lower: 77, upper bilobectomy: 17; lower bilobectomy: 7. In six cases sleeve lobectomy was performed. The median surgical time was 90 minutes (range 25-305

minutes) and median intra-operative drainage was 100ml (range 20-2100ml). Median hospitalization time was 5 days (range 2-40 days). Postoperative complication rate was 25% (with the persistent air leakage being the most frequent complication: 102 patients (20.4%). Reoperation for bleeding occurred in 7 patients (1.4%). There was no operative or 30-days mortality.

Among the 468 VATS lobectomies performed due to malignant lesions, 450 lung cancers and 18 metastases were removed. The distribution according to the stage and histology of lung cancers was as follows: 0: 5, IA: 173, IB: 148, IIA: 45, IIB: 39, IIIA: 38 and IIIB: 2; adenocarcinoma: 327, squamous cell carcinoma: 54, small cell carcinoma: 1, non-small cell lung carcinoma: 1, carcinoid: 67.

#### Conclusions

With the results in our institution this approach has demonstrated to be reproducible, comprising all the advantages of a minimal invasive surgery, without jeopardizing the efficiency of the oncologic treatment.

Nowadays, in our department, more than 95% of lobectomies are performed with minimally invasive technique.

## THORACIC SURGERY - SELECTED ORAL COMMUNICATIONS

# LYMPH NODE UPSTAGING AFTER SURGERY IN PATIENTS WITH NEGATIVE MEDIASTINAL STAGING BY EBUS

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1 - CHULN

## Introduction

Mediastinal staging is a hot topic in thoracic oncology. According to the guidelines in the presence of a primary lung cancer with increased lymph node uptake on PET-CT, a negative result after lymph node sampling by EBUS is not enough to rule out mediastinal lymph node involvement, demanding a cervical mediastinoscopy to vouch for the results.

## Objectives

Primary endpoint: Total percentage of lymph node surgical upstaging in patients with negative mediastinal node staging by EBUS.

Secondary endpoint: Percentage of lymph node surgical upstaging on the node stations previously sampled by EBUS.

## Materials and Methods

We conducted a search in our departments database using the key-word EBUS in the period between January 2014 and August 2020. A total of 302 patients were found. We selected 42 cases after applying the following criteria: Inclusion - Primary lung cancer; Increased lymph node uptake on PET-CT; Negative EBUS; At least one of the lymph node stations sampled by EBUS explored in surgery. Exclusion - EBUS without diagnostic yield; Neoadjuvant chemotherapy.

## Results

Of the 42 patients, 30 (71%) were males and 12 (29%) females. Adenocarcinoma was present in 67% of the cases, squamous cell carcinoma in 21%, giant cells in 7% and

atypical carcinoid tumour in 5%. The right upper lobe (RUL) was involved in 41% of the cases, right lower lobe (RLL) in 24%, left lower lobe (LLL) in 19%, left upper lobe (LUL) in 14% and middle lobe in 2%.

Lymph node surgical upstaging occurred in 11 (26%) patients, of which 8 were upstaged to N2 and 3 to N1. In the N2 group, single station upstaging occurred in half of the cases.

Lower lobes were affected in 64% of the upstaged patients. However, in only 5 (12% of the total) of the 11 patients, the upstaging was related to lymph node stations previously sampled by EBUS. The upstaged patients had tumours involving the RLL in 2 cases, the RUL in other 2 and the LLL in 1. Of the 6 (14% of the total) in which upstaging took place in lymph nodes not sampled by EBUS, half of them concerned to station 5 and 9, not accessible by EBUS and the other half to station 12. Adenocarcinoma was the most frequent histological subtype in the upstaged group.

## Conclusions

Although the total number of upstaged patients is substantial (26%), with predominance of the lower lobe tumours, we realize that only in 12% it was related to lymph node stations previously sampled by EBUS. Furthermore, the other 14% would not benefit from cervical mediastinoscopy due to the location of the involved lymph nodes (stations 5, 9 and 12). Both EUS or VATS might be helpful in these cases, but being N2 single station it might not change the indication for upfront surgery.

## THORACIC SURGERY - SELECTED ORAL COMMUNICATIONS

# LUNG RESECTION FOR NON-SMALL-CELL LUNG CANCER - A NEW RISK SCORE TO PREDICT MAJOR PERIOPERATIVE COMPLICATIONS

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## Introduction

Lung cancer is the leading cause of cancer-related deaths worldwide. Surgery remains the best treatment for obtaining a cure in patients in resectable stages. Despite the improvements in surgical techniques, perioperative complications are still a major factor of mortality. Several scoring systems for quantifying surgical risks have been proposed but they require large and complex information, usually regarding specific groups or postoperative mortality.

## Objectives

Identify risk factors for major in-hospital perioperative complications (MIPC) after anatomical lung resection for Non-Small-Cell Lung Cancer (NSCLC) establish a clinical scoring system.

## Materials and Methods

Single center retrospective study of all consecutive patients diagnosed with NSCLC submitted to anatomical lung resection from 2015 to 2019 (N=564). Exclusion criteria: previous lung surgery (29), concomitant non-lung cancer related procedures (10), urgency surgery (5). The population of study was 520 patients. Primary end-point: MIPC defined as a composite endpoint including at least one of the following in-hospital variables – myocardial infarction, cardiac arrest, de novo Atrial Fibrillation, stroke, acute renal lesion, bleeding, acute pulmonary edema, primary respiratory failure, respiratory infection, empyema, sepsis, wound infection and need for reoperation. Univariable and Multivariable analyses were developed to identify predictors of perioperative complications and create a risk score.

Discrimination was assessed using the C-statistic. Calibration was evaluated by Hosmer and Lemeshow test and internal validation was obtained by means of bootstrap replication.

## Results

The study population had a mean age of 65 years and 327 (62.9%) were males. Mean hospital stay of 9 days after surgery. Overall MIPC rate was 23.3%. Among 26 clinical variables, male gender (OR 1.9; CI95%:1.16-3.07; p=0.010), hypertension (OR 2.1; CI95%:1.35-3.37; p=0.001), forced expiratory volume in 1s (FEV1) less than 75% (OR 2.5; CI95%:1.53-1.17; p<0.001), thoracotomy (OR 2.1; CI95%:1.20-3.57; p=0.009), bilobectomy/pneumectomy (OR 2.5; CI95%:1.2-4.9; p=0.011) and concomitant lung cancer procedures (OR 2.1; CI95%:1.20-3.58; p=0.009) were independent predictors of MIPC. A risk score based on the odds ratios was developed and ranged between 0 and 14 points. The scoring system was divided in 5 groups: 1-2 points (Positive predicted value (PPV) 15%); 3-4 (PPV 25%); 5-7 (PPV 35%); 8-9 (PPV 60%); >10 points (PPV 88%). The score showed reasonable discrimination (C-statistic=0.70), good calibration (P=.643) and it was internally validated (averaged C-statistic=0,71).

## Conclusions

This study proposes a simple and daily-life risk score system that was able to predict the incidence of perioperative complications, in order to identify patients at a high risk and facilitate clinical decision-making related to treatment strategy selection.

# SHORT ORAL COMMUNICATIONS

## THORACIC SURGERY - SHORT ORAL COMMUNICATIONS

### THERAPEUTIC STRATEGY FOR RESECTABLE STAGE IIIA/N2 NSCLC: A SINGLE CENTER EXPERIENCE

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#### Introduction

Patients with resectable IIIA/ N2 disease have poor outcomes after resection alone and the optimal treatment remains controversial, justifying multimodal individualized interventions.

#### Objectives

This study aimed to evaluate the clinical outcomes of this specific setting of patients treated in our institution.

#### Materials and Methods

We retrospectively analyzed the medical records of all patients with pathological N2 disease operated with curative intent, between January 2012 and June 2020. All patients in our cohort treated prior to 2017 were re-staged according to the 8th TNM edition.

#### Results

A total of 28 patients were enrolled, 15 were males, the median age was 68 years old (IQR 73-63) and 22 had a smoking history. Adenocarcinoma was the prevalent histology (n=21), with positive impact on survival (p=0.016). The majority of patients (n=20) had surgery up-front and adjuvant chemotherapy (SC); the remaining had surgery in combination with other treatment regimens (OT). The median follow-up time was 29 months (IQR 13.75 – 38). The median disease free survival (DFS) and overall survival (OS) were 14 (IQR 9.5 – 22) and 31.5 months (IQR

13.5-43.5), respectively. Three patients died of a non-related cause. Twenty-four patients had an anatomical lung resection (bi/lobectomy=22, pneumonectomy=2) and 16 had minimally invasive surgery. All patients had complete resection. The median length of hospital-stay was 5.5 days (IQR 3.75-10.25). There was no 30-day mortality, and no morbidity associated with pneumonectomy. No OS difference was identified between anatomical and non-anatomical resection (p=0.456). The SC group analysis (n=20) revealed a DFS and OS similar to the overall group (n=28), with more than 50% of the patients alive at 36 months and a 65% 2-years OS; we found no correlation between survival and the number of mediastinal lymph-nodes removed (p=0.206), and no OS difference between pathological single-station versus multi-station N2 (p=0.631); thirteen patients had recurrence, 10% in the lymph nodes, with a median OS not significantly different between the recurrence and the non-recurrence subgroup (p=0.749).

#### Conclusions

Our results in general overlap those of literature. A worse survival would be expected in patients with N2 multi-station and a superior morbidity associated with pneumonectomy; we nevertheless regard our results with caution as bias can be introduced by the small sample size. Efforts must continue to identify the best treatment strategy for the IIIA-N2 patients as the prognosis is still unsatisfactory.

## THORACIC SURGERY - SHORT ORAL COMMUNICATIONS

## SURGICAL MANAGEMENT OF IATROGENIC POST-INTUBATION TRACHEAL RUPTURE: CASE REPORT

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### Introduction

Iatrogenic tracheal rupture is a rare complication after intubation. It represents a life-threatening condition requiring prompt diagnosis, management, and treatment. The management of iatrogenic tracheal rupture is challenging, and treatment options depend on tear location, size, injury extent, and the patient's respiratory status.

### Objectives

The authors report a case of a 39-year-old woman, with no medical history, who experienced an iatrogenic tracheal rupture during endotracheal intubation with a double lumen tube for a bilateral thoracic sympaticectomy under general anaesthesia.

### Materials and Methods

When performing fibroscopy for confirmation of the tube's positioning, a discontinuity at the level of the posterior tracheal wall – with an extension of about 4-5 cm - beginning at the middle 1/3 and extending to about 1.5 cm from the carina was verified. She then was submitted to a CT scan where an area of interruption of the posterior wall of the upper/middle third of the trachea, superior to the carina, discretely lateralized to the right, with a maximum circumferential orifice of 1cm and with an extension of about 5.5

cm was observed. It was associated with a medium/large volume pneumomediastinum that extended to the anterior aspect of the covered abdominal plans.

### Results

The patient was transferred to our hospital still intubated for urgent surgical treatment. She was successfully submitted to correction of the tracheal laceration through a transversal 4cm cervicotomy and a longitudinal anterior extended tracheotomy. After surgery, she was extubated early in the operative room and discharged after a 5-day course of broad-spectrum antibiotic prophylaxis with imipenem. She was observed 1 month after discharge without complaints or complications. She was submitted to a new bronchoscopy showing preserved tracheal caliber, with good cicatrization of the sutures of the anterior and posterior walls, without granulation or evidence of dehiscence.

### Conclusions

We managed this case surgically because the patient had a large tear > 2 cm, with rapid establishment of a medium/large volume pneumomediastinum. Immediate recognition and adequate treatment are very important in managing this potentially fatal situation. The final decision should be based on clinical, radiologic and bronchoscopic findings.

## THORACIC SURGERY - SHORT ORAL COMMUNICATIONS

## RESULTS OF SURGERY OF CHRONIC PULMONARY ASPERGILLOSIS – OUR CENTRE’S EXPERIENCE

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### Introduction

Aspergillosis refers to a spectrum of disease caused by *Aspergillus* species that includes simple aspergilloma, chronic cavitary pulmonary aspergillosis (CCPA) and subacute invasive aspergillosis (SAIA) (1;3).

Surgical results of CCPA or SAIA are worse when compared with those for simple aspergilloma, and the surgical indications remain somewhat unclear. These patients can be challenging due to ongoing inflammatory process and the risk for postoperative complication. (1,2;3).

### Objectives

We retrospectively reviewed our surgical results between August 2010 and August 2020.

### Results

Twenty-five patients underwent surgery for pulmonary aspergillosis at Department of Cardiothoracic Surgery of University Hospital Center of São João: 12 patients (48.0%) with aspergilloma, 10 (40.0%) with chronic cavitary pulmonary aspergillosis and 3 (12.0%) with sub-acute invasive aspergillosis. We excluded the pediatric patients. Seventeen patients were males with a median age of 48 years-old (range 19-69). Five patients had COPD, 7 patients were immunocompromised, 10 patients had

bronchiectasis on CT scan and 12 patients had a previous history of tuberculosis. *Hemoptysis* was the most frequently symptom (44%) and was the main reason of refer for surgery.

Nineteen patients were submitted to lobectomy (76%), 5 patients were submitted to wedge resections (20%) and one patient was submitted to a left pneumectomy (4%). More than half of the patients (52% n=13) had mainly the left superior lobe affected by aspergillosis follow by superior right lobe and inferior left lobe (24% each).

Median time at hospital was 8 days (4-98) and medium time of drainage was 7 days (1-47). *Prolonged pulmonary air leak* was the most frequently (20% of patients) complication follow by *non-nosocomial respiratory infection* (12%), *chronic pain* (8%) and *hemothorax* (4%). At the end of the follow-up 23 patients were alive (92%).

Results were considered statistically significant if  $p < 0,05$ . In our study there was no statistically significant differences in hospital length of stay, length of drainage and rate of complications according to subtype of aspergillosis (aspergilloma; CCPA and SAIA).

### Conclusions

There were no relapses of aspergillosis on the first year after surgery on patients who kept outpatient following.



## THORACIC SURGERY - SHORT ORAL COMMUNICATIONS

# SURGICAL RESECTION OF SMALL-CELL LUNG CANCER: TWENTY YEARS OF EXPERIENCE AT UNIVERSITY HOSPITAL CENTER OF SÃO JOÃO

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## Introduction

Small-cell lung cancer (SCLC) includes approximately 15% of all newly diagnosed lung cancers worldwide and is distinguished by its rapid growth rate and early dissemination. Despite advances in the treatment the 5-year survival rate remains low. The National Comprehensive Cancer Network Guidelines (3) reported less than 5% of the patients with SCLC are diagnosed in stage I-IIA. This is the group of patients most likely to benefit from surgery. Lobectomy with mediastinal lymph node dissection is the preferred operation and patients who undergo complete resection should be treated with postoperative systemic therapy. Surgical resection is associated with longer survival and approaches 40% to 50% at 5 years with adjuvant chemotherapy (2). Surgical resection of presumed early SCLC may also be beneficial so as not to miss a mistakenly diagnosed SCLC which may indeed be a NSCLC or mixed neuroendocrine tumor.

## Objectives

We retrospectively reviewed our surgical results between August 2000 to August 2020.

## Results

Eight patients with SCLC were submitted to thoracic surgery (5 lobectomies, 1 pneumectomy and 2 wedge resection). The surgical biopsies were excluded. Six patients were

males with a median age of 62 years-old (range 50-79) and 50% had an history of emphysema or COPD. Four patients were active smoker, one was a former smoker and one was a non-smoker (none information was available for the remaining 2 patients). Most of diagnoses was obtained by a transbronchial lung biopsy. The median post-operative length of drainage was 4 (range 1-43) days, and median post-operative length of stay was 6 (range 5-44) days. We reported 3 complications (1 case of non-nosocomial respiratory infection and 2 cases of prolonged pulmonary air leak). All the patients had a complete R0 resection. Only 3 patients had exclusive SCLC in pathological findings (the other 5 were associated with NSCLC). Postoperative staging between I-IIA were found in 62.5% (n=5). All the patients were submitted to adjuvant chemotherapy. One patient was submitted to cerebral radiotherapy after the diagnosis of cerebral metastasis.

## Conclusions

The only two patients alive in the present time were submitted to thoracic surgery in June of 2017 and December of 2019. Five of the seven (71%) patients were alive after 1 year of surgery but only one of six (17%) were alive after 5 years of surgery, according to completion of the follow-up. The median time between date of death and the date of diagnosis was 699 days (range 360-2724 days), less than 2 years.

# JUAN ROSAI MEMORY – THYMOMAS CLASSIFICATION

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## Introduction

Thymomas classification dates from 1976 Juan Rosai/Gerald Levine established the epithelial nature of the “thymoma” and correlated morphology and biological behaviour with the degree of thymus capsule invasion at surgery. Surgical staging was fundamental for the subsequent classification of Masaoka *et al* in 1981, still commonly used in routine. Müller-Hermelink Histogenetic Classification (1999) supported WHO 2004/2014 classification, allowing the actual naming Thymomas in A and/or B typing.

Overall survival for types AB and B1 Thymomas is very good – 80-100% at 5 and 10 years and for type B2, 70-90% at 10 years has been recognized.

## Objectives

Juan Rosai (August 20, 1940 – July 7, 2020) legate calls attention for the actual 2014 WHO thymomas classification. A broad morphology recognition is demanded instead of a single cut apart language – case report of a Thymoma AB, with B1 and B2 components.

## Materials and Methods

Solid 11,3x7cm antero-superior mediastinum mass detected at CT was proposed for surgical removal in a 65-years old woman hospitalized suspecting of Rickettsial infection.

## Results

Surgical specimen weighing 329g and measuring

12x9x7cm, delimited by thymus thin and shiny capsule showed tumoural cut surface, vaguely lobulated, tan to pink and smooth.

Microscopic evaluation detected two intermingled different components: a clear nodular pattern with bland spindle cells bundles – thymoma A, interspersed with B pattern where quantity variable population epithelial superimposing T cells (CD3+) defined patterns of thymomas type B1 and type B2.

## Conclusions

Thymomas are a rare malignancy in general, but the most common mediastinal tumours in adults over forties, with type AB as the most common, between 11 and 89 years old followed by type B2 and B1.

Type AB thymoma encompasses poverty of lymphocytes over spindle cells (type A) besides other epithelial component rich in T lymphocytes (type B).

In the present a case it was possible to subtype B component thymoma in either B1 and B2 by applying 2014 WHO recommendations. Taking into account Type B2 thymoma poorer outcome compared to Type AB and Type B1 thymomas, it is important to differentiate and subtype B component when present, to preview of possible therapeutic strategies in follow up.

No etiologic factor has been still attributable for the appearance of this kind of neoplasia, but there are some reports and putative thymic epithelial cells precursors.

## THORACIC SURGERY - SHORT ORAL COMMUNICATIONS

# POSTOPERATIVE ATRIAL FIBRILLATION - VIDEO-ASSISTED THORACOSCOPIC SURGERY VERSUS OPEN SURGERY

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## Introduction

Postoperative atrial fibrillation (PAF) is one of the most common complications after noncardiac thoracic surgery, increasing postoperative mortality, morbidity and hospital stay. However, the etiology of PAF still remains unclear. It is proved video-assisted thoracoscopic surgery (VATS) has significantly less morbidity and a shorter hospital stay than open procedures. Nevertheless, there is no agreement if VATS is related to incidence of PAF, with some data suggesting this procedure, by obviating surgical stress induced by ribspreading thoracotomy, may result in a decreased rate of PAF.

## Objectives

Compare the incidence of PAF after anatomical lung resection for Non-Small-Cell Lung Cancer (NSCLC) following open surgery versus VATS.

## Materials and Methods

Single center retrospective study of all consecutive patients diagnosed with NSCLC submitted to anatomical lung resection from 2015 to 2019 (N=564). Exclusion criteria: prior atrial fibrillation (26), previous lung surgery (29), concomitant procedures (10), pneumectomy (14), extra-lung resections (41), urgency surgery (5). The population of study was 439 patients. Primary end-point: PAF, defined by in-hospital electrocardiographically documented atrial fibrillation requiring initiation of pharmacological therapy. The patients were divided in 2 groups according to type of procedure: thoracotomy or VATS. Patients converted from VATS

for whatever reason were assigned to thoracotomy group. Univariable analysis was used to compare the baseline characteristics of the 2 groups. We use inverse probability of treatment weighting (IPTW) multivariable logistic regression model to obtain unbiased estimates of average procedure effect on PAF. A total of 22 clinical variables were included in the model. The balance between treatment groups after IPTW was assessed by standardized mean differences.

## Results

Two hundred and eighty patients (63.8%) were submitted to thoracotomy and 159 (36.2%) to VATS. Patients submitted to VATS were more likely to be females ( $p=0.004$ ), had a lower prevalence of Diabetes Mellitus ( $p=0.028$ ), previous respiratory disease ( $p=0.042$ ), non-adenocarcinoma ( $p<0.001$ ) and chronic heart failure ( $p=0.026$ ). They were submitted less often to neoadjuvant therapy ( $p<0.001$ ), bilobectomy ( $p=0.001$ ) and they presented higher levels of diffusing capacity for carbon monoxide ( $p=0.001$ ). After IPTW adjustment, all clinical covariates were well balanced. PAF occurred in 8.6% of the patients undergoing thoracotomy and 3,8% of the patients after VATS. After IPTW adjustment, VATS was not associated with a lower incidence of PAF (OR 0.40; CI95%:0.140-1.171;  $p=0.095$ ).

## Conclusions

In this study, minimally invasive non-rib spreading VATS did not decrease the incidence of PAF when compared with standard thoracotomy regarding anatomical lung resection for NSCLC.

## THORACIC SURGERY - SHORT ORAL COMMUNICATIONS

## RECURRENT PLEURAL EFFUSION - AN UNUSUAL DIAGNOSIS IN A YOUNG MALE

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2 - Hospital de Santa Cruz, CHLO

### Introduction

Malignant pleural mesothelioma (MPM) is a rare cancer, with poor outcome. Often associated with asbestos exposure, recent data reported a genetic predisposition in some patients. The optimal treatment is still under debate and investigation.

### Materials and Methods

We report a case of a young adult diagnosed with recurrent pleural effusion and no history of asbestos exposure.

### Results

Case presentation: A 33 years-old male, non-smoker, account manager, without relevant medical history or current medication. With no occupational asbestos exposure. In 2016, the patient first presented with left pleuritic pain and pleural effusion on chest x-ray, but without evidence of infection.

After 2 years, the left pleural effusion recurred, without further findings on chest CT. A diagnostic thoracentesis was performed and fluid analysis was negative for both cytologic and cultural tests. Autoimmune disease was ruled out. There was resolution of the pleural effusion without repeated thoracentesis or drainage.

In 2019, he was admitted to the emergency department with recurrent pleuritic pain and left pleural effusion, with de novo left costophrenic pleural thickening on CT-Scan. FDG PET-Scan showed increased uptake on the pleura located

in the left costophrenic angle and in the fissure (SUV 2-5), without other lesions. A pleural biopsy was performed, by video-assisted thoracoscopic surgery, and pathologic analysis revealed epithelioid MPM. Genetic study detected function loss of BRCA1-associated protein (BAP-1).

After multidisciplinary discussion, the patient was proposed for surgery in our department. The patient underwent radical left pleurectomy/decortication without any intraoperative complication. He was admitted at our ICU for immediate care and was extubated at first postoperative (PO) day. There were no postoperative complications, chest tube was removed on the tenth PO day and he was discharged home the day after. Pathologic analysis confirmed epithelioid MPM, disease stage II (pT2N0M0). Adjuvant treatment with cisplatin plus pemetrexed was performed and well tolerated, as well as pulmonary rehabilitation. Follow-up after 5 months, the patient was asymptomatic and without recurrence.

### Conclusions

Germline mutations of BAP1 predispose to several different tumors including malignant mesothelioma. The diagnosis of MPM can be delayed by non-specific symptoms. The role of surgery (pleurectomy/decortication or extrapleural pneumonectomy) in MPM is critically discussed. Macroscopic complete resection, an R1 resection, is the objective of surgery for MPM. In selected patients, surgery should be performed in experienced centers.

## SOLITARY FIBROUS TUMORS OF THE PLEURA – 20-YEAR EXPERIENCE

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### Introduction

Solitary fibrous tumors of the pleura (SFTP) are rare, slowly growing pleural neoplasms. Patients are usually diagnosed in their 5th to 8th decade, without associated symptoms. The best treatment consists of margin free surgical resection (R0).

### Objectives

We analysed our center's surgical experience with SFTP, describing the demographic and individual patient/tumor characteristics, the surgical options and results over a period of 20 years.

### Materials and Methods

The Department's database was searched for SFTP between January 2000 and July 2020, resulting in total of 58 cases. 51 patients were included in the final analysis.

### Results

31 were women (61%) and 20 men (39%). Most (88%) were diagnosed over age 50, the average age being 60.2 years (range 30 – 78). Symptoms were present in 43% of the patients (22 cases), most commonly coughing, dyspnea or unspecific symptoms (weight loss, tiredness, anorexia). Thoracalgia was present in 17.6% (9) and 7.8% (4) had finger clubbing and polyarthralgia. Doege-Potter syndrome was found in one case (1.9%) and completely resolved after surgery.

The largest tumor diameter was 22 cm and the smallest one 2 cm, with an average size of 6,62 cm. Videothoracoscopy was performed in 35% (18 cases) and thoracotomy in the remaining 33 (65%). R0 resection rate was 90.2%. Lung resection, along with the mass, was performed whenever the origin was the visceral pleura, to insure a safe margin: wedge resection in 49% (25 cases), lobectomy in 5.9% (3 cases) and bilobectomy and pneumonectomy each in 1.9% (one case). Other structural en-bloc resections were also necessary at times: ribs in one case (1.9%) and diaphragm in 2 (3.9%). Predictors of recurrency were present in 30 patients: pleural effusion (1 case, 1.9%), atypical localization (41.2%; 21 cases), histological criteria for malignancy (7 cases, 13.7%) and border-line in 1 (1.9%). There were 4 recurrences (7.8%). 3 out of these 4 patients had an atypical localization of the tumor defined as parietal or costal/cisural pleura. In all cases the resection was deemed complete, none had histological criteria for malignancy, but necrosis was present in 3 cases and atypia in the other 2. Disease free survival was 49 months (range 13 – 105).

### Conclusions

Solitary fibrous tumors of the pleura are characterized by uncertain behavior. They often present as large asymptomatic masses. *En bloc* complete resection is the most important prognostic factor. Relapse can occur more than a decade after the initial diagnosis.