SUPPLEMENT

ABSTRACTS OF THE SPCCTV 4D VISIONS 2025

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THORACIC SURGERY

THORACIC

POSTERIOR MEDIASTINAL MASS COMPLICATED BY CHYLOTHORAX: A CASE OF INDOLENT B-CELL LYMPHOMA

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Keywords: *Chylothorax, Mediastinal mass, Thoracic duct ligation*

INTRODUCTION: Chylothorax is a rare but potentially serious complication of thoracic procedures. It is particularly challenging when associated with mediastinal masses of uncertain origin. This case illustrates the diagnostic and therapeutic complexity of a posterior mediastinal mass with a complicated postoperative course. A 58-year-old male, autonomous, with no relevant medical history or regular medication, and an active smoker, was investigated for thoracic pain. A chest CT angiography revealed a retrocrural thoracic right-sided, latero-aortic, elongated hypodense lesion (25x18 mm). Follow-up PET showed dimensional progression and metabolic activity. Surgical excision by VATS (Video Assisted Thoracic Surgery) was performed, removing a 7 cm posterior mediastinal mass. Postoperatively, the patient developed a high output chylothorax. Initial approach with parenteric nutrition and octreotide was insufficient. The patient was first submitted to VATS thoracic duct ligation followed by lymphangiography, performed by the interventional radiology, which were both unsuccessful. The case was then discussed with General Surgery department and abdominal ligation of the thoracic duct using indocyanine green was performed, with complete resolution of the chylothorax. In the postoperative period the patient deteriorated clinically, with elevated inflammatory markers and progression to sepsis, due to a fungal infection related to the central venous line. He required prolonged hospitalization in Infectious Diseases and multiple lines of antibiotics and antifungals. Histopathological analysis revealed lymph node tissue with neoplastic lymphoid proliferation. Immunohistochemistry showed positivity for CD20, CD23, CD5, and BCL2, and negativity for CD10 and CD3, consistent with an indolent CD20+ B-cell lymphoma (Ki67 40%). The patient remains asymptomatic under Hematology follow-up. A reassessment CT in July 2025 showed stable small lymph nodes in the superior mediastinum. Surgical excision of mediastinal masses may lead to significant complications. Early recognition and appropriate management of chylothorax are essential. This case highlights the importance of a multidisciplinary approach in managing mediastinal masses, especially when complicated by chylothorax and severe infection. The definitive diagnosis of indolent B-cell lymphoma was only possible after surgical excision, underscoring the diagnostic challenges.

THORACIC

AMBULATORY VIDEO-ASSISTED THORACOSCOPIC LUNG BIOPSY IN PATIENTS WITH INTERSTITIAL LUNG DISEASE

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Keywords: *Ambulatory thoracic surgery, Interstitial lung disease*

INTRODUCTION: Ambulatory surgery enhances patient satisfaction and reduces time to return to daily activities and hospital costs. While some thoracic procedures are routinely performed in an outpatient setting, lung resection surgery generally requires hospitalization. There have been reports in the literature about ambulatory surgery but these usually refer to an admission of less than 24h, not necessarily discharging the patient on the same day of surgery. Objectives The goal of this study is to evaluate the feasibility of ambulatory video-assisted thoracoscopic (VATS) lung biopsy in patients with interstitial lung disease (ILD). Materials and Methods We evaluated all ILD patients who underwent ambulatory VATS lung biopsy in our institution between January and August 2025. Results During this period, 183 patients underwent thoracic surgery; 31 (17%) had ambulatory surgery, including 11 (35,5%) VATS lung biopsy for ILD. With growing team expertise and routine adoption of regional anesthesia alone, same-day discharge became the standard for eligible patients, except when technical, medical or social criteria precluded it. All of the 11 patients mentioned above were preoperatively assessed in a multidisciplinary ILD center. Four had general anesthesia and 7 non-intubated thoracic surgery (5 with epidural anesthesia and 2 with paravertebral block). Mean length of stay was 7,4h. During the course of the study period, introduction of the Thopaz+ digital drain system allowed air leak evaluation before leaving the operating room; if flow was 0L/min for 5 minutes after the patient was extubated (general anesthesia) or after being fully awake (regional anesthesia), the drain was removed. A chest x-ray was performed 1,5h late, and if there were no signs of pneumothorax, patients were discharged after good pain control and being able to breathe deeply with adequate diaphragmatic mobility. All patients received a standardized analgesic care package to take home and a follow-up video call from a thoracic surgeon the next day. They were evaluated in a consulta a few days later. The postoperative period was uneventful with no readmissions or reoperations. Conclusion Increasing surgical team expertise and technological support enabled same-day discharge for selected ILD patients after VATS biopsy, with no rise in complications.

SOLITARY FIBROUS TUMOUR: CLINICAL PRESENTATION, HISTOPATHOLOGY, SURGICAL TREATMENT AND FOLLOW-UP IN A TERTIARY CENTRE

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Keywords: *Thoracic solitary fibrous tumours, Thoracic surgery Recurrence*

INTRODUCTION: Thoracic solitary fibrous tumours are rare and usually benign. Between 10-20% show malignant behaviour, difficult to predict preoperatively. Complete surgical resection remains the treatment of choice. These tumours often result in late or undetected recurrences, since optimal follow-up strategies remain undefined. Objectives: To evaluate clinical, histopathological and tumour features, surgical treatment and follow-up of thoracic solitary fibrous tumours, including recurrences. MATERIALS AND METHODS: A retrospective single-centre case series of patients surgically treated for thoracic solitary fibrous tumours was conducted between January 2015 and August 2025. Clinical records, surgical notes and pathology reports were reviewed. RESULTS: Twenty-one patients with an initial diagnosis of thoracic solitary fibrous tumour underwent surgery during the study period. Median age at diagnosis was 65 years and the cohort included 11 males (52%) and 10 females (48%). Thirteen (62%) were symptomatic. Thoracotomy was performed in 16 patients (76%) and VATS in 5 (24%). Major complications (Clavien-Dindo ≥III) occurred in 1 case (reoperation for haemothorax). Median postoperative stay was 3 days. Risk stratification according to the Demicco four-variable model classified 12 tumours (57%) as low risk, 9 (43%) as intermediate risk, and 1 (5%) as high risk. Surgical margins were R0 in 14 cases (67%), R1 in 5 (24%) and Rx in 2 (9%). From 18 patients with ≥12 months of follow-up, 2 (11%) developed confirmed recurrence and 1 (6%) remains under surveillance for suspected recurrence; one of these patients died of the disease. Seven patients underwent surgery for recurrent disease during the study period. Median time to first recurrence was 7 years. Five patients (71%) experienced two or more recurrences. Among 8 procedures for recurrent disease in our centre, one patient (12.5%) developed a major complication (Clavien-Dindo IIIb, reoperation for haemothorax). At last follow-up, 1 patient (14%) had no evidence of disease, 4 (57%) were alive with disease and 2 (29%) had died of disease. CONCLUSION: Although most thoracic solitary fibrous tumours are benign, there is a subset that behaves aggressively. These have recurrences, underscoring the importance of long-term surveillance. Surgical resection is generally safe, with few complications and short hospital stay. VATS may be a valid alternative to thoracotomy when feasible.

THORACIC

HYPERTHERMIC INTRATHORACIC CHEMOTHERAPY FOR THYMIC EPITHELIAL TUMORS PROTOCOL AND CASE REPORT

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Keywords: *HITHOC, Thymic epithelial tumors, Hyperthermic intrathoracic chemotherapy*

INTRODUCTION: Although rare, thymic epithelial tumors (TET) are the most common primary neoplasms in the anterior mediastinum. Surgery is the mainstay of treatment and complete resection is an important prognostic factor. Pleural and pericardial dissemination may be present at diagnosis or in recurrence, and its treatment is challenging. Surgery alone can rarely achieve local control. Hyperthermic intrathoracic chemotherapy (HITHOC) combines direct cytotoxicity with the enhancement of the immune system's response to eradicate residual cancer cells. It has shown promising results in local disease control and patient survival in advanced TET, as well as in malignant pleural mesothelioma (MPM). However, there are still no standard HITHOC protocols or guidelines. Objectives: Present the rationale and structure of the HITHOC protocol in use in a Portuguese cancer center. Describe the first case of HITHOC performed in our center. Materials and methods: Protocol creation was divided into three rounds. First, a thorough review of existing literature was performed and an outline of the surgical protocol was created and presented. Then each involved specialty proceeded to make a draft of the steps in which they were implicated, which were presented and discussed. Finally a full version was created and discussed and a final document was achieved. Results: The authors present a protocol that describes not only the surgery step-by-step, but also the preoperative evaluation and optimization, perioperative management, postoperative care and safety considerations. The authors also present the case of a 37-year-old patient with a stage IV thymoma. Despite several treatment modalities, local disease control was not achieved. The patient underwent complete cytoreduction and HITHOC by uniportal video-assisted thoracic surgery (VATS). Despite concerns about nephrotoxicity, kidney function remained unaltered, and the patient was discharged on the 5th postoperative day. Conclusion: HITHOC may have a role in the treatment of TET with pleural dissemination and MPM. However, due to the small number of cases and centers performing this technique, more studies are necessary to determine its efficacy and safety, and standardization of procedures is essential to improve outcomes and amplify its use in the multimodal treatment of these malignancies.

THORACIC

DIAGNOSTIC PERFORMANCE OF VAMLA IN MEDIASTINAL LYMPH NODE STAGING: SINGLE-CENTER EARLY RESULTS

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Keywords: *VAMLA, Video-assisted mediastinoscopic lymphadenectomy, Lung cancer staging*

INTRODUCTION: Correct mediastinal lymph node staging is crucial in the treatment of lung cancer, particularly for determining resectability. When there is suspicion of mediastinal nodal involvement, invasive staging is necessary. Despite endobronchial ultrasound-guided transbronchial needle aspiration (EBUS-TBNA) being first line, it is dependent on node characteristics and operator experience, and tissue yield may be insufficient. Negative results should be interpreted according to suspicion of cN2/3 and may need to be confirmed by surgical staging. Video-assisted mediastinoscopic lymphadenectomy (VAMLA) is a staging procedure where mediastinal lymph node stations are systematically explored and all lymph nodes found are removed. VAMLA was introduced in our center in November 2024. **OBJECTIVES:** Audit the VAMLA program. Evaluate the relevance and adequacy of the mediastinal staging algorithm. Materials and methods: A retrospective analysis of all the VAMLA cases from November 2024 to August 2025 was performed. **RESULTS:** 37 patients were submitted to VAMLA in the period in analysis. The indications for invasive mediastinal staging were suspicion of nodal involvement on computed tomography (CT) or positron emission tomography (PET-CT), central tumors, tumors >3 cm and/or resectable small cell lung cancer. 17 patients had previous EBUS-TBNA. Of the 16 cases that had a negative or unsatisfactory EBUS-TBNA, 3 were positive at VAMLA. In total, 6 patients had nodal involvement at VAMLA. Using VAMLA as reference, PET-CT had a sensitivity of 83%, specificity of 19%, positive predictive value (PPV) of 17%, negative predictive value (NPV) of 86% and diagnostic accuracy of 30%. In comparison, EBUS-TBNA demonstrated a sensitivity of 25%, specificity of 100%, PPV of 100%, NPV of 81% and diagnostic accuracy of 82%. 20 patients were later submitted to lung resection and lymphadenectomy. Stations explored at VAMLA were re-checked, and in 7 patients no lymph nodes were present in these locations. In reference to lymphadenectomy, VAMLA had a specificity of 100%, NPV of 88% and diagnostic accuracy of 88% (it was not possible to calculate other metrics due to the small sample). **CONCLUSION:** The choice between EBUS-TBNA and VAMLA for mediastinal lymph node staging depends on local availability, expertise and results. Our results are limited by the small sample and short study period. More patients are necessary to allow for subgroup analysis and to obtain robust conclusions.

THORACIC

A CHALLENGING CASE - COMPLICATED INVASIVE PULMONARY ASPERGILLOSIS WITH BRONCHOPLEURAL FISTULA REPAIR

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Keywords: *Aspergillosis, Bronchopleural Fistula, Lobectomy*

INTRODUCTION: Invasive pulmonary aspergillosis (IPA) is a life-threatening opportunistic fungal infection that may present with massive hemoptysis, requiring urgent multidisciplinary management. Surgical resection, although high risk, may be necessary for definitive control in cases of uncontrolled bleeding or localized aspergilloma. **METHODS:** We present a retrospective case review of a female patient with IPA complicated by postoperative bronchopleural fistula. **OBJECTIVES:** To describe the clinical course and long-term outcomes. **RESULTS:** A 25-year-old woman with prior pulmonary tuberculosis presented with massive hemoptysis leading to acute respiratory failure. Bronchoscopy showed extensive bronchial necrosis and active bleeding in the right upper lobe. Initial management with bronchial artery embolization provided only partial control. Given clinical deterioration and high risk of recurrent bleeding, she was emergently intubated, started on voriconazole, and underwent urgent right upper lobectomy via posterolateral thoracotomy. Histopathological examination confirmed aspergilloma. The postoperative course was complicated by lobar atelectasis and pneumonia due to retained secretions, successfully treated with bronchoscopy. The patient recovered well and was discharged on day 12. On postoperative day 25, however, she developed fever, cough with purulent sputum, and recurrent dyspnea. Bronchoscopy showed a bronchopleural fistula, initially managed conservatively with chest drainage and antibiotics. After clinical stabilization, the patient underwent re-thoracotomy with direct closure and reinforcement with intercostal muscle flap; although recurrence occurred two weeks later. Definitive closure was achieved through repeated endoscopic procedures with coil placement and biological glue. Follow-up bronchoscopies confirmed complete healing seven months after presentation. Antifungal therapy was maintained throughout hospitalization and continues in the outpatient setting. At nine months follow-up, she remains stable, with no recurrence of fistula **CONCLUSION:** This case illustrates the challenges of emergency IPA management. Multidisciplinary care integrating surgery, interventional radiology, bronchoscopy, and antifungal therapy was crucial for survival and long-term control. Surgery was lifesaving but associated with early and late complications. Endoscopic techniques contributed to definitive treatment. An integrated approach proved essential to ensure durable outcomes in complex aspergillosis.

THORACIC

MINIMALLY INVASIVE RIGHT LOWER LOBECTOMY WITH BRONCHOPLASTY FOR CENTRAL SQUAMOUS CELL CARCINOMA: A VIDEO CASE REPORT

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Keywords: *Bronchoplasty, Lobectomy, VATS*

INTRODUCTION: Lung-sparing resections using bronchoplastic techniques are valuable in patients with centrally located non-small cell lung cancer (NSCLC). With advances in minimally invasive surgery, VATS has been increasingly applied to these complex procedures. Although technically demanding, VATS lobectomy with bronchoplasty may achieve oncological outcomes comparable to thoracotomy while reducing morbidity and preserving function. **METHODS:** We report a video case of a patient with centrally located NSCLC treated by VATS right lower lobectomy with bronchoplasty. **OBJECTIVES:** To demonstrate the feasibility and technical aspects of minimally invasive lobectomy with bronchoplasty. **RESULTS:** A 53-year-old male, former smoker (20 pack-years), was diagnosed with a centrally located right lower lobe squamous cell carcinoma (31mm). PET-CT showed high metabolic activity without mediastinal involvement, and mediastinoscopy confirmed NO. Bronchoscopy demonstrated extrinsic compression of B6 with direct signs of tumor infiltration; biopsy confirmed squamous cell carcinoma. Cardiopulmonary exercise testing demonstrated functional reserve (VO2 peak 28.8mL/kg/min). The patient underwent a VATS right lower lobectomy with bronchoplasty. Intraoperatively, marked inflammation made hilar dissection challenging. The lower lobe bronchus was transected at its origin, on the level of the lobar carina between the middle and lower lobe bronchi, and lobectomy was completed. A bronchoplasty was fashioned between the bronchus intermedius and the middle lobe bronchus using a PDS 4/0 running suture. Frozen section of the margin confirmed absence of tumor. Careful attention was given to bronchial orientation, avoidance of torsion, and airtight closure. Postoperatively, the patient developed middle lobe atelectasis requiring bronchoscopy, which showed a narrow but intact suture without dehiscence. The patient completed an empiric antibiotic course and was discharged on postoperative day 12. Pathology revealed squamous cell carcinoma, pT2aN0R0. At six month follow-up, CT showed good middle lobe expansion, preserved bronchial healing, and no evidence of recurrence. **CONCLUSION:** This case highlights the feasibility of VATS lobectomy with bronchoplasty for central NSCLC. Careful margin assessment and precise reconstruction are critical to ensure oncological complete resection and functional preservation. The video demonstrates the key steps and challenges of minimally invasive bronchoplasty.

THORACIC

SURGICAL OUTCOMES OF POSTERIOR MEDIASTINAL TUMORS: A 11-YEAR RETROSPECTIVE ANALYSIS

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Keywords: *Posterior Mediastinal Tumors, Surgical Excision, Mediastinum*

INTRODUCTION: Posterior mediastinal tumors are rare lesions, most commonly of neurogenic origin. With the widespread use of imaging, many are now incidentally detected. Surgical resection remains the standard of care, enabling complete removal with low morbidity. **OBJECTIVES:** To evaluate the clinical presentation, surgical management, and outcomes of patients with posterior mediastinal tumors treated at our institution. **METHODS:** We performed a retrospective review of patients undergoing surgery between 2014 and 2024. Survival was analyzed until December 2024. R: Forty patients were included, with a mean age of 46.6 ± 15.5 years and male predominance (60%). Most patients (70%) were asymptomatic, with incidental detection on imaging. The most frequent diagnosis was cystic lesions (n=16, 40%) - predominantly bronchogenic cysts (n=10, 25%), and one case of Hattori cyst. Neurogenic tumors accounted for 37.5% (n=15). The remaining cases consisted rare pathologies, such as lipomas, ganglioneuromas, and mediastinal metastasis (n=2). Preoperative biopsy was performed in 9 patients (23%). Surgical management was predominantly minimally invasive: VATS in 18 patients (45%) and RATS in 10 (25%), whereas 12 patients (30%) required thoracotomy. Conversion to open surgery occurred in 3 cases (7.5%): one cystic lesion complicated by subclavian artery injury, one bronchogenic cyst with transdiaphragmatic extension, and one paraesophageal cyst with difficult dissection from the esophagus. Median chest drainage time was 2 days (IQR 1-3), with 7 patients managed without a drain. Median hospital stay was 2 days (IQR 1-5). Major postoperative complications (Clavien Dindo III-IV) occurred in 4 patients (10%). No tumor recurrence was observed. Two deaths occurred during follow-up, one from oncologic progression (mediastinal metastasis of endometrial cancer) one month after surgery, and another unrelated to the primary mediastinal disease. Overall survival was 97.5% at 1-7 years and 91.8% at 8-10 years of follow-up. **CONCLUSION:** Posterior mediastinal lesions are most often identified incidentally and typically represent benign cystic or neurogenic pathologies. In this series, minimally invasive approaches predominated, with low morbidity, short drainage, and brief hospitalization. The absence of recurrence and favorable survival highlight surgical ressection, particularly minimally invasive resection, as the cornerstone of management for this heterogeneous group of posterior mediastinal lesions.

VATS LOBECTOMY AFTER NEOADJUVANT CHEMOIMMUNOTHERAPY: A CASE REPORT

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Keywords: *Perioperative systemic therapy, Video-assisted thoracoscopic surgery, Lung cancer*

INTRODUCTION: Neoadjuvant chemoimmunotherapy has become an emerging strategy for locally advanced non-small cell lung cancer, improving pathological response rates and enabling complete surgical resection in selected cases. However, surgery after chemoimmunotherapy can pose significant technical challenges due to fibrosis, adhesions, and altered tissue planes. **OBJECTIVES:** To illustrate the surgical management of a left upper lobe adenocarcinoma after neoadjuvant chemoimmunotherapy, highlighting technical challenges during video-assisted thoracoscopic surgery (VATS). **MATERIALS AND METHODS:** Retrospective analysis of a case of a VATS left upper lobectomy after neoadjuvant chemoimmunotherapy. **RESULTS:** A 63-year-old man with significant smoking history (50 pack-years) presented with a 2-month history of anterior thoracalgia. Initial imaging with thoracic CT revealed a 58 mm lesion in the left upper lobe and PET-CT demonstrated a hypermetabolic mass (SUVmax 17.8) along with group 5 and peri-left bronchial lymph nodes showing increased uptake. Brain MRI excluded metastatic disease, establishing a clinical stage of cT3N2aM0. A transthoracic biopsy confirmed pulmonary adenocarcinoma with positive PD-L1 expression, and a cervical mediastinoscopy was subsequently performed, sampling lymph node stations 4L, 4R, and 7, all negative for malignancy. The case was discussed in a multidisciplinary team, and, given the PET-positive group 5 lymph node station, neoadjuvant chemoimmunotherapy with pembrolizumab and chemotherapy was recommended. After completing four cycles, the patient underwent a VATS left upper lobectomy with systematic lymph node dissection. Dissection of group 5 lymph nodes was particularly challenging due to fibrosis and invasion of the left recurrent laryngeal nerve. Histopathology revealed residual adenocarcinoma with <1% viable tumour, 10% necrosis, and 90% stromal changes. In group 5, only the tumour bed was identified, with no residual neoplastic tissue. Final staging was ypT1aNO, RO. Thoracic drainage was removed on postoperative day 1, and the patient was discharged on postoperative day 2, with no complaints of dysphonia. He is currently undergoing adjuvant immunotherapy and remains clinically well. **CONCLUSION:** This case highlights the feasibility of VATS lobectomy after neoadjuvant chemoimmunotherapy in a technically demanding scenario, achieving an excellent pathological response and complete resection, with minimal morbidity.

THORACIC

PERFORMANCE AND DIAGNOSTIC ACCURACY OF CERVICAL ME

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Keywords: *Mediastinoscopy, Mediastinal staging, Staging accuracy*

INTRODUCTION: Accurate mediastinal staging is essential in managing thoracic malignancies, as it guides treatment and prognosis. Endobronchial ultrasound (EBUS) has progressively replaced cervical mediastinoscopy as the first-line minimally invasive technique. Despite this shift, mediastinoscopy remains relevant in selected cases, particularly when EBUS is unavailable or inconclusive. **OBJECTIVE:** To evaluate the performance of cervical mediastinoscopy in mediastinal staging, focusing on diagnostic accuracy compared with final pathology, and safety, in our centre. Materials and methods We retrospectively reviewed all staging mediastinoscopies performed between 2020 and 2024. Demographic data, indication criteria, prior EBUS, nodal stations sampled, histological results, complications, length of hospital stay, and concordance with final pathology were analysed. **RESULTS:** A total of 148 staging mediastinoscopies were performed (79.1% men; mean age 66.6 ± 9.4 years). Most procedures were performed for lung cancer, and 3 for mesothelioma. In 43 patients (29.1%), mediastinoscopy was performed without prior histological confirmation. Indication criteria included tumour size ≥ 3cm in 67.6%, suspected N+ on CT/PET in 68.9%, and central tumour location in 44.6%; 61.5% had multiple criteria. Thirteen patients (8.8%) had preoperative EBUS: 2 non representative, 7 negative for cancer, and 3 positive but incomplete. Three or more mediastinal stations (including station 7) were sampled in 90.5% of cases, most commonly 4R, 4L, and 7. Fourteen procedures (9.5%) were non representative in at least one station. No conversions were required. Complications occurred in 16 patients (11.2%), all transient dysphonia. Median hospital stay was 1 day. Following mediastinoscopy, 104 patients (70.3%) proceeded to surgery, with median interval of 28 days (range 9–98). Concordance with final pathology was high, with 10/104 (9.6%) false negatives in accessible stations. Five had unsuspected N2a disease in station 5. Considering only accessible stations, sensitivity for detecting N2/N3 disease was 82/92 (89.1%), and specificity was 100%. **CONCLUSIONS:** Cervical mediastinoscopy at our centre demonstrated high diagnostic accuracy, low morbidity, and good concordance with final pathology, achieving a sensitivity of 89.1% for detecting N2/N3 disease in accessible stations. These results highlight mediastinoscopy's continued value when EBUS is unavailable, inconclusive, or delayed.

THORACIC

UNIPORTAL VATS LEFT LOWER SLEEVE LOBECTOMY WITH UPPER LOBE BRONCHIAL REIMPLANTATION FOR TYPICAL CARCINOID TUMOR: A CASE REPORT

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Keywords: *Sleeve lobectomy, Video-Assisted Thoracic Surgery, Carcinoid Tumor*

INTRODUCTION: Sleeve lobectomy is a parenchyma-sparing alternative to pneumonectomy for centrally located tumors. Performing this procedure via a uniportal VATS approach remains technically demanding but offers potential benefits in recovery and morbidity. Objectives To describe the surgical management of a left lower lobe typical carcinoid tumor using uniportal VATS with bronchial sleeve ressection and upper lobe reimplantation. **MATERIALS AND METHODS:** A 36-year-old female, non-smoker, was referred after diagnosis of a typical carcinoid tumor by EBUS-TBNA. Imaging (CT, PET-DOTANOC) revealed a 25 mm left hilar lesion without mediastinal involvement. Pulmonary function was normal. Bronchoscopy showed a highly vascularized endobronchial mass causing >75% obstruction of the left lower lobe bronchus, originating from B6 and extending to the inferior lobar wall, with patent basal segments beyond the obstruction. Through a single 4th intercostal space incision, a uniportal VATS approach was performed. After fissure completion and vascular division with endoscopic staplers, systematic lymphadenectomy (stations 7, 9, 11, 12) was carried out. The upper lobe bronchus was isolated, followed by bronchotomy. The lower lobe bronchus was resected with a proximal margin on the main bronchus. The upper lobe bronchus was reimplanted into the main bronchus using a continuous 4-0 Prolene suture in a parachute technique. Air leak test was negative. A single chest drain was placed through the incision. **RESULTS:** Postoperative recovery was uneventful. Final pathology confirmed a typical carcinoid tumor (pT1cN1, R0) with one N1 lymph node metastasis. Bronchial margins were negative. After multidisciplinary tumor board discussion, the patient was placed under surveillance. **CONCLUSIONS:** Uniportal VATS sleeve lobectomy with bronchial reimplantation is a technically demanding but safe and effective option for central located carcinoid tumors with endobronchial extension. This approach enables complete oncological resection while preserving lung parenchyma and demonstrates the applicability of advanced bronchoplastic techniques in minimally invasive thoracic surgery.

THORACIC

ANATOMICAL SEGMENTECTOMIES (2020–2025): REAL WORLD CASELOAD, PERIOPERATIVE OUTCOMES AND EARLY ONCOLOGIC RESULTS FROM A SINGLE THORACIC UNIT

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Keywords: *Lung Neoplasms, Segmentectomy, Retrospective Studies*

INTRODUCTION: Anatomical segmentectomy is increasingly adopted, reshaping paradigms in thoracic surgery as a new standard of care. This parenchyma sparing technique is gaining significance for early stage NSCLC and for patients with limited pulmonary reserve. We report real world outcomes of a five year period from anatomical segmentectomies performed in our thoracic unit. **OBJECTIVES:** To describe the caseload, pathology, perioperative morbidity (using the Clavien–Dindo classification), and early oncologic outcomes of the patients submmited to segmentectomy in our center. Materials and **METHODS:** We conducted a retrospective single center cohort study encompassing anatomical segmentectomies performed between January 2020 and July 2025. Eligible cases included patients undergoing segmentectomy for malignant or benign pulmonary lesions. Malignant tumour staging followed the 8th edition of the TNM classification. Postoperative outcomes were assessed with a focus on 30 day complications. Prolonged air leak (PAL) was defined as the persistence of an air leak for more than 5 postoperative days. Overall survival (OS) and recurrence free survival (RFS) were estimated by Kaplan–Meier with censoring on 15 september 2025. **RESULTS:** A total of 115 patients were included (mean age 66.8 years, 56.5% male; left sided resections 61.7%). Most frequent procedures were trisegmentectomy of the left upper lobe and S6 resections. R0 resection was achieved in 97.4%; median length of stay (LOS) was 5 days. IA2 was the most common pathological stage (43.1%), and 83% of malignant tumors were stage I. Recurrence ocurred in 4 patients (3.5%) during follow-up. Any 30 day complication occurred in 30.4%, mainly due to prolonged air leak (PAL) in 21.7%. PAL was associated with a median LOS of 9 days vs 4 days without PAL, corresponding to a median excess of +5 days; 30 day readmissions occurred in 3.5%. At 12/24/36 months, OS was 98.1/95.6/93.9% and RFS 97.0/94.3/92.4%. **CONCLUSIONS:** This five year analysis demonstrates that anatomical segmentectomy ensures high oncologic quality and low major complication rates. Although prolonged air leak remains the most frequent morbidity, its impact is primarily on hospital stay rather than long time morbimortality. Survival outcomes at three years were favourable, supporting segmentectomy as a safe and effective parenchyma sparing alternative for appropriately selected patients, including those with limited functional reserve.

THORACIC

UNIPORTAL VATS RESECTION OF A PEDIATRIC BRONCHOGENIC CYST: VIDEO CASE REPORT

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Keywords: *Pediatric thoracic surgery, Bronchogenic cyst, Uniportal VATS*

INTRODUCTION: Bronchogenic cysts are rare congenital malformations that may require surgical excision to prevent complications. Minimally invasive approaches, including uniportal video-assisted thoracoscopic surgery (UVATS), are increasingly used in pediatric thoracic surgery due to their potential benefits in reducing morbidity. **OBJECTIVES:** To present a pediatric case of bronchogenic cyst resected via U-VATS, emphasizing the surgical technique, safety, and clinical outcomes. **MATERIALS AND METHODS:** This is a video case report of a pediatric patient undergoing U-VATS for mediastinal cyst resection. The video provides intraoperative views of key mediastinal structures and details the surgical technique. **RESULTS:** An 8-year-old girl presented with atypical cervical pain, which prompted a cervical MRI. This study incidentally revealed a right posterior mediastinal cyst, guiding further thoracic imaging and diagnosis. She subsequently underwent complete excision via U-VATS. The surgical technique involved a single intercostal incision and careful dissection to avoid injury to adjacent structures. The extrapleural cyst was closely related to the vagus nerve, superior vena cava, right subclavian vein, azygos vein, and trachea. Resection was achieved under direct thoracoscopic visualization without intraoperative complications or conversion to open surgery. Postoperative recovery was uneventful, with minimal pain, no significant adverse events, and early hospital discharge. Histopathology confirmed a bronchogenic cyst, and the patient remained asymptomatic with no evidence of recurrence at follow-up. **CONCLUSIONS:** U-VATS is a safe and effective technique for resection of mediastinal bronchogenic cysts in pediatric patients, offering advantages such as reduced postoperative pain, shorter hospital stay, and excellent cosmetic outcomes. This case also underscores that bronchogenic cysts may present with unusual symptoms, as in this child with isolated cervical pain, highlighting the importance of thorough imaging when evaluating atypical clinical presentations.

THORACIC

VATS EXCISION OF AN ECTOPIC MEDIASTINAL PARATHYROID ADENOMA: A CASE REPORT

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Keywords: *Ectopic parathyroid adenoma, Minimally invasive surgery*

INTRODUCTION: Primary hyperparathyroidism is the most common cause of hypercalcemia in the outpatient setting. Despite its prevalence, it often remains underdiagnosed. The most frequent etiology is parathyroid adenoma, which in about 20% of cases is located in an ectopic position, increasing diagnostic and surgical complexity. Surgical excision is the only curative treatment, and the minimally invasive video-assisted thoracoscopic surgery (VATS) approach is increasingly valued for its safety, efficacy, and lower morbidity. **METHODS:** Presentation of a clinical case. **RESULTS:** A 67-year-old female patient with a past medical history of bilateral breast cancer, prophylactic bilateral adnexectomy, and heart failure was referred to endocrinology due to PTH-dependent hypercalcemia, suggestive of primary hyperparathyroidism. Etiological workup revealed a "right paratracheal nodule in the superior mediastinum (26×20 mm), suggestive of parathyroid adenoma" on chest CT and "a focal uptake compatible with ectopic adenoma" on scintigraphy. Given these findings, the patient was referred to thoracic surgery and proposed for VATS excision of the lesion. The procedure was uneventful. Intraoperative PTH monitoring met the Miami criteria, with a pre-excision value of 703 pg/mL, 574 pg/mL at 5 minutes, and 88 pg/mL at 10 minutes. Histopathological examination confirmed a parathyroid adenoma with complete excision. **DISCUSSION/ CONCLUSION:** The diagnosis of ectopic parathyroid adenomas remains a challenge, often requiring the combination of multiple imaging modalities for precise localization. In this case, scintigraphy was essential in complementing radiological findings. Intraoperative PTH monitoring, according to the Miami criteria, confirmed complete excision of the hyperfunctioning gland. The minimally invasive VATS approach proved safe and effective, enabling complete resection with low morbidity. This case highlights the importance of multidisciplinary collaboration between endocrinology, imaging, and thoracic surgery in the diagnosis and treatment of primary hyperparathyroidism associated with ectopic adenomas.

THORACIC AMBULATORY SURGERY: PILOT PROJECT AT OUR CENTER

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Keywords: *Ambulatory Thoracic Surgery, Outpatient Surgery, Thoracic Day Surgery*

INTRODUCTION: Ambulatory surgery allows patients to be admitted and discharged on the same day or within 23 hours. Recent advancements in anesthesia and pain management, combined with the successful implementation of ERAS protocols and minimally invasive surgical techniques, have expanded the scope of outpatient surgery to include increasingly more complex procedures, particularly in thoracic diseases. **METHODS:** This study aimed to evaluate the initial outcomes of patients undergoing ambulatory thoracic surgery at IPOC between May and August 2025. Eligible patients were selected according to anesthetic risk (ASA I–III), surgical indication, distance to the hospital, and availability of home surveillance. Data were analyzed using descriptive statistics (SPSS). **RESULTS:** Twelve patients were included, equally distributed between females and males, with a mean age of 48.5 years (29–71). All had a caregiver available for the first 48 postoperative hours. Preoperative classification was predominantly ASA II (83.3%), with one ASA III (8.3%). The main indications were mediastinal (58.3%) and pulmonary (16.7%) pathologies. All patients and families received structured education on postoperative care and warning signs and signals. VATS was performed in 83.3% of cases, with a mean operative time of 51 minutes. Seven patients required an arterial line; none required urinary catheterization. Procedures included thymectomy (41.7%), non-anatomical lung resection (16.7%), bleb excision with pleurodesis (8.3%), mediastinal lesion resection (8.3%), videomediastinoscopy (8.3%), sympathectomy (8.3%), and others (8.3%). Thoracic drains were placed in three patients due to air leaks; two were removed within 24h, while one patient was discharged with ambulatory surveillance. Eleven patients were discharged within 23h; one required admission to the ward for persistent air leak. During 30-day follow-up, two patients developed complications: one required reoperation for hemothorax, another had pneumonia. At reassessment, two reported mild pain, the remainder were pain-free. One patient presented with minor wound dehiscence. No mortality was observed. **CONCLUSION:** Ambulatory thoracic surgery proved feasible and safe in this cohort, with low morbidity, effective pain control, and early discharge achieved in most cases. These results support the progressive adoption of outpatient thoracic surgery as a sustainable and patient-centered model within the National Health Service.

THORACIC

PANCOAST TUMORS: SURGICAL OUTCOMES AND EXPERIENCE IN OUR THORACIC SURGERY DEPARTMENT

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Keywords: *Pancoast tumor, surgical outcomes, multimodality treatment*

INTRODUCTION: Superior sulcus pulmonary tumors (SSTs) are a rare subset of lung cancer that are notable for their peripheral location and involvement with structures near the pulmonary apex. Typically diagnosed during the symptomatic stage, they include pain in the shoulder or upper limb, muscle atrophy of the hand, and Horner's syndrome. Treatment involves a multimodal approach featuring induction chemoradiotherapy followed by en bloc resection of lung and chest wall. This approach is best executed in specialized, high-volume centers. **OBJECTIVE:** Evaluate the outcomes and epidemiology of our unit in treating SST patients. **METHOD:** From 2015 to 2025, 19 patients with clinically diagnosed SST were referred to our unit. Two patients were excluded due to lack of chest wall involvement intraoperatively, and two due to confirmed unresectability. All surgical procedures were anatomical lung resections (upper lobectomy in 12 cases, 2 superior bilobectomies and 1 apicoposterior + anterior segmentectomy) with mediastinal lymph node dissection and rib resection. **RESULTS:** The cohort was slightly male predominant (53,33%) with a mean age of 61.4 years. At diagnosis, 80% of patients were symptomatic, with 53,33% reporting pain localized to the ipsilateral shoulder or upper limb and 20% presented with hemoptysis. A total of 12 patients received neoadjuvant chemoradiation and 2 neoadjuvant chemoimmunotherapy, with 20% showing pathological complete response. Histological types were as follows: 60% adenocarcinomas (N=9), 33.33% squamous cell carcinomas (N=5), and 1 case of pulmonary carcinoma that could not be clearly stated to be of pulmonary origin due to its IHC pattern. The average hospital stay was 15.8 days (min. 7, max. 31). Major morbidity included 4 cases (26.66%) consisting of new onset Horner's syndrome, one associated with paresthesia of the cubital forearm and muscle atrophy, and one with parestesias of the right arm. No mortality was recorded. All patients that underwent surgery had complete ressection with the percentage of R0 being 93.33%. **CONCLUSION:** Our results are consistent with those of leading centers, although they reveal a need for improved early detection and referral processes to specialized centers, as our numbers were lower compared to other reports.

TRAUMATIC COMPLETE RIGHT MAIN BRONCHUS LACERATION: A CASE REPORT

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Keywords: *right main bronchus laceration, traumatic thoracic injury, surgical management*

INTRODUCTION: Tracheobronchial injuries after blunt thoracic trauma are uncommon but potentially life threatening. Early recognition and prompt multidisciplinary management are critical to reduce morbidity and mortality. **CASE REPORT:** A previously healthy 56 year old male sustained crushing thoracic injuries when caught in an agricultural machine. He was initially brought to Hospital de Torres Vedras sedated with a laryngeal mask for airway protection. At that hospital, General Surgery placed chest tubes for bilateral pneumothoraces identified on imaging and performed an exploratory laparotomy because of pneumoperitoneum on CT. The patient was transferred later to our tertiary center for definitive care. On arrival he had extensive subcutaneous and mediastinal emphysema, diminished right sided breath sounds, and a persistent large right sided air leak. CT imaging demonstrated right main bronchus laceration with separation from the trachea. Given the radiologic evidence of major airway disruption and progressive respiratory compromise, VV-ECMO was instituted for gas exchange and to enable protective airway ventilation; preoperative bronchoscopy was deferred and the patient was taken to the operating room for urgent right thoracotomy. Intraoperative findings included a complete circunferential full thickness laceration of the right main bronchus at its origin from the trachea. Surgical management consisted of primary end to end bronchial anastomosis using uninterrupted non absorbable suture (Prolene™) of the cartilagenous section and absorbable suture (PDS™) of the membranous section. Bronchoscopy on postoperative day 1 showed an intact anastomosis without leak. Postoperative care included continued VV ECMO support, lung protective mechanical ventilation, antibiotic therapy, and aggressive pulmonary toilet. VV ECMO was weaned and removed as ventilation improved; the patient was extubated 29 days post surgery. The patient was discharged to a long term rehabilitation facility. **CONCLUSIONS:** Right main bronchus laceration after crushing trauma can be successfully managed with early recognition, immediate airway protection, chest drainage, temporary VV ECMO to support ventilation, and timely surgical repair. Multidisciplinary perioperative care in a specialized center ensures safe airway reconstruction and favorable outcomes.

MINIMALLY INVASIVE PULMONARY METASTASECTOMY IN THE PEDIATRIC POPULATION: RESULTS OF AN INTERINSTITUTIONAL PROTOCOL

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Keywords: *Metastasectomy, Uniportal VATS*

INTRODUCTION: Pulmonary metastasectomy is a cornerstone in the multimodal treatment of pediatric solid tumors. The uniportal video-assisted thoracoscopic surgery (uniVATS) approach offers a minimally invasive alternative to thoracotomy, but evidence regarding its impact on recurrence and disease-free survival remains limited. Factors such as type of tumor, time of diagnosis of metastasis and response to systemic therapies are pointed out as predictors of recurrence. **METHODS:** We retrospectively reviewed pediatric patients who underwent pulmonary metastasectomy using uniVATS, from 2021 to 2024, following the establishment of an interinstitutional protocol between pediatric surgery and thoracic surgery. Clinical data and recurrence patterns were analyzed, with attention to potential risk factors for recurrence. **RESULTS:** Nine patients (7 males and 2 females) were identified. Median age at time of metastasectomy was 13 years. Primary tumors were osteosarcoma (n=4), Wilms tumor (n=3), and Ewing sarcoma (n=2). Pulmonary metastases were present at initial primary tumor diagnosis in 5 patients (55%). UniVATS was successfully completed in all 9 cases without conversion to thoracotomy. The only registered complication was a postoperative pneumothorax that solved conservatively. Median length of stay was 3 days. During follow-up, 6 of 9 patients (67%) experienced recurrence of metastasis. There was no statistically significant difference found in recurrence in patients with synchronous vs metachronous metastasis (p=0.595). Type of primary tumour was also not associated with recurrence (p=0.453). Disease free interval was shorter in patients with metastasis present at diagnosis, although this difference was not significant (3.33 vs 5.33 months, p=0.055). Patients with Wilms tumors had a shorter disease free interval, although not statistically significant (3 vs 5 months, p=0.082). **CONCLUSIONS:** UniVATS is a safe and feasible approach for pulmonary metastasectomy in pediatric patients, with favorable perioperative outcomes. Despite a high recurrence rate, initial pulmonary involvement at diagnosis and type of primary neoplasm did not predict disease-free survival in this cohort. Larger multicenter studies are needed to better define prognostic factors and optimize patient selection.

THORACIC

OVERCOMING CHALLENGES IN ROBOTIC LOBECTOMY AFTER CHEMOIMMUNOTHERAPY

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Keywords: *Robotic Surgery, Neoadjuvant Chemoimmunotherapy, Lung Cancer*

INTRODUCTION: Minimally invasive techniques have become the standard in lung cancer surgery, with robotic-assisted thoracic surgery (RATS) providing enhanced precision and visualization. Neoadjuvant chemoimmunotherapy is altering the landscape of resectable non small cell lung cancer (NSCLC) by increasing response rates. However, it is also introducing new surgical challenges such as increasing difficulty of lymphadenectomy, distortion of normal tissue planes, and nodal fibrosis that make dissection harder. **OBJECTIVES:** To present a video showing the feasibility of robotic right upper lobectomy after combined chemoimmunotherapy. Materials and Methods We report the case of a 72-year-old male diagnosed with right upper lobe adenocarcinoma (cT1bN2M0) who underwent robotic lung surgery after chemotherapy and immunotherapy with pembrolizumab. Robotic right upper lobectomy with systematic lymph node dissection was performed. **RESULTS:** Despite the presence of nodal fibrosis, robotic magnification and articulated instruments enabled precise dissection and prevented vascular injury with only minimal bleeding being recorded (blood loss: 80 ml). The post operative recovery was favorable, with only a persistent air leak requiring conservative management. There was only partial response and the final pathology result was ypT1bN2. **CONCLUSIONS:** Robotic platforms can help overcome neoadjuvant therapy-related fibrotic changes, preserving minimally invasive benefits whilst still ensuring proper oncologic resection.

THORACIC

OUTCOMES OF LOBECTOMIES WITH BRONCHOPLASTY: AN 8-YEAR SINGLE-CENTER EXPERIENCE

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Keywords: *Bronchoplasty, Lobectomy, Lung cancer*

INTRODUCTION: Bronchoplastic procedures allow curative resection of centrally located lung tumors while preserving lung parenchyma. **OBJECTIVE:** To analyze perioperative outcomes, complications, and survival in patients undergoing lobectomy with bronchoplasty **METHODS:** We retrospectively analyzed all patients submitted to lobectomy with bronchoplasty for primary lung cancer between 2017 and 2024 in a tertiary center. Clinical, pathological, perioperative, and follow-up data were analyzed using SPSS. **RESULTS** Thirty-one patients were included, with a median age of 63.1 years (IQR 56.2–68.0); 64.5% were male; 61.3% had smoking history (median 50 pack-years). The median Charlson Comorbidity Index (CCI) was 4 (IQR 3–5.5) and the median Thoracoscore was 2.8% (IQR 1.1–3.5). Histology showed NSCLC in 48%, carcinoid tumors in 42%, and SCLC in 6.5%. Nearly half of the patients had stage I disease (48%), while 29% were stage II and 23% stage III. Thoracotomy was the predominant approach (71%), while VATS was used in 29% of cases. Sleeve lobectomy was performed in 19.4%. Arterioplasty was also necessary in 16.1% of patients. Neoadjuvant treatment was performed in 6.5% and adjuvant treatment in 32.3%. Complete (R0) resection was achieved in 93.5% of cases (R1 in 6.5%). Median chest tube duration was 6 days (IQR 4–9) and hospital stay 7 days (IQR 5–10). Higher CCI correlated with longer chest tube duration ($p=0.035$) and hospital stay ($p=0.045$). Clavien-Dindo >= 3 complications occurred in 19.3% of cases, including 2 perioperative deaths. Bronchial complications were rare: one minor dehiscence treated conservatively and one bronchopleural fistula requiring surgical intervention. Recurrence occurred in 16.1%, all in stage II–III disease: 2 were local (none at the bronchoplasty site) and 3 were distant. Median disease-free survival among recurrent patients was 19.3 months. Median overall survival for the cohort was 31.1 months. Kaplan–Meier analysis showed statistically significant differences in overall survival by stage ($p=0.035$), worse in stage III; and between histological subtypes.

THORACIC

ROBOT-ASSISTED PURE BRONCHOPLASTIC RESECTION FOR ENDOBRONCHIAL CARCINOID: A VIDEO CASE PRESENTATION

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Keywords: *RATS, Carcinoid tumors, Bronchoplasty*

INTRODUCTION: Lung carcinoid tumors are rare neuroendocrine neoplasms characterized by slow growth and often present as central airway lesions. A proportion of them are predominantly endobronchial and remain confined within the bronchial wall. Surgical resection is the treatment of choice for these neoplasms. Given their central location, parenchyma-sparing techniques may be preferable to avoid lobectomy or pneumonectomy. In selected cases, pure bronchoplastic resections are a safe and effective option. Case Report We present the case of a 41-year-old woman with a known history of hemithyroidectomy for multinodular goiter and breast reduction surgery. She presented to her primary care physician with cough, wheezing, and fatigue. Chest CT showed a 12 mm endobronchial lesion in the intermediate bronchus. Bronchoscopy confirmed a pedunculated lesion proximal to the B6 origin, and biopsy demonstrated a carcinoid tumor. 68Ga-PET/CT revealed a hypermetabolic nodule (SUVmax 29.7) with no metastasis. Lung function was normal. Following multidisciplinary tumor board discussion, surgical resection was indicated. The patient underwent a robot-assisted thoracoscopic (RATS) pure bronchoplastic resection with lymphadenectomy. During surgery the oblique fissure was opened, the inferior pulmonary artery was dissected and isolated, facilitating exposure of the intermediate bronchus. Bronchoscopy confirmed the exact location of the lesion. After bronchotomy, a segment of bronchus containing the lesion and its implantation area was resected. Frozen section confirmed negative margins, and the bronchus was closed with a running suture. Water submersion test showed no air leak, and immediate postoperative bronchoscopy confirmed bronchus patency. Recovery was uneventful. The chest tube was removed on day 1, and the patient was discharged on day 2. Final pathology revealed a pT1a N0 R0 typical carcinoid tumor. At 5 months follow-up, she remains asymptomatic with no recurrence. Conclusion Pure bronchoplastic resection using RATS approach is safe and effective for endobronchial carcinoid tumors. The platform's 3D visualization and precise dissection allow excellent exposure of bronchial and vascular structures, making it a valuable technique for lung-sparing surgery.

THORACIC

INSIGHTS INTO NEOADJUVANT TREATMENT WITH IMMUNOTHERAPY – A 5-YEAR EXPERIENCE

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Keywords: *NSCLC, immunotherapy, pathologic response*

INTRODUCTION: The advent of neoadjuvant immunotherapy has redefined lung cancer treatment, improving survival outcomes, highlighting the relevance of combined strategies in resectable disease. The objective of this study is to evaluate the epidemiology of our unit in the treatment of patients with neoadjuvant immunotherapy and determine pathological responses. This retrospective observational study analysed patients submitted to lung surgery after neoadjuvant treatment with chemotherapy and immunotherapy, at our center between January 2020 and September 2025. Data was analysed using SPSS software (version 29). One patient did not undergo surgery due to lymph node progression under treatment and was excluded. A total of 22 patients (59.1% males) with mean age of 67.5 years-old were included. 50% were active smokers, 50% reported having respiratory comobidities. Concerning lung cancer, 72.7% were adenocarcinoma, 27.3% squamous cell carcinoma, from stage IIA (9.1%), IIB (13.6%), IIIA (54.6%), IIIB (18.2%), and one stage IV (single brain metastasis treated with radiosurgery with good response). For mediastinal staging, 86.4% were submitted to EBUS, and 9.1% performed mediastinoscopy. Concerning neoadjuvant immunotherapy, 45.5% received treatment with Nivolumab, 50% with Pembrolizumab, and 4.5% with Durvalumab. All patients underwent chest computed tomography for restaging and 63.6% showed a reduction in tumour and lymph node size. We performed inferior bilobectomy (4.5%), lobectomies (77.3%), lobectomy with segmentectomy 6 (4.5%), lobectomy with costal resection (4.5%) and pneumectomies (9%). The approach was by thoracotomy in 81.8%. Our complication rate was 36.4%, mainly prolonged air leaks and respiratory infections. Concerning the pathologic response, we report 22.2% of complete (CPR) and 66.7% of major pathologic response (MPR) with Nivolumab. With Pembrolizumab, we identified 12.5% of CPR and none MPR. Comparing with literature data, both our CPR are similar (24% and 18.1%, respectively). However, our MPR appears to be higher with Nivolumab and lower with Pembrolizumab than in the literature, which could be explain by the low number of cases included in this study. Immunotherapy as neoadjuvant provides a maximum benefit response for patients with resectable non-small cell lung cancer. Due to the limited number of cases presented, it was not possible to determine the overall or disease free survivals, which we aim to do in future studies.

THORACIC

A COMPLEX PREOPERATIVE ASSESSMENT FOR A GIANT LUNG MASS

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Keywords: *preoperative assessment, giant lung mass, multidisciplinary approach*

INTRODUCTION: Large, hypervascular lung masses of unknown origin present a surgical challenge. Thorough preoperative assessment and optimization are essential to ensure intraoperative safety and improve outcomes in such highrisk thoracic procedures. We report the case of a 19-year-old female from Angola, non-smoker and previously healthy, who developed progressive fatigue, haemoptysis and anterior chest pain over 4 months. Examination showed digital clubbing and BMI 15.37 kg/m^2. Chest computed tomography (CT) revealed a large hypervascular pulmonary mass in the right upper and middle lobe, with heterogeneous uptake on PET-CT (SUV 4–8). Bronchofibroscopy and transthoracic aspiration biopsy were inconclusive, suggesting teratoma versus pulmonary sequestration, and negative for malignant cells. Beta-HCG, alpha-fetoprotein and beta-2-microglobulin were also negative. The case was discussed in a multidisciplinary meeting with pulmonology, radiology, oncology and thoracic surgery, and a surgical approach was proposed. CT angiography revealed abnormal vessels from the abdominal aorta to the middle lobe, requiring three embolizations: aortic branch below the celiac trunk, right internal mammary, and subclavian branches. She was evaluated by immunohemotherapy for microcytic anaemia (Hb 5.8 g/dL), receiving one unit of erythrocyte concentrate, ferric carboxymaltose and folic acid with good response. Furthermore, she presented with a hypogonadotropic hypogonadism for further follow-up in Endocrinology consultation. Cardiorespiratory assessment was unremarkable. A right-sided anteriorposterior thoracotomy was performed and identified a voluminous mass invading all three pulmonary lobes, adherent to the thoracic wall, diaphragm and anterior mediastinum. Given the impossibility of isolating the lower lobe, a right pneumonectomy with mediastinal lymphadenectomy was performed. Estimated blood loss was 300 milliliters, with no need for blood transfusions. The postoperative period was uneventful, with immediate care provided in an intensive care unit for closer monitoring. The chest drain was removed on the second postoperative day. This case highlights the importance of rigorous preoperative assessment and a multidisciplinary approach in managing complex pulmonary masses, underscoring the essential role of collaboration across medical specialties.