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As seguintes comunicações:
The following communications:

ORAL COMMUNICATIONS

CO 004. Severe Toxicity to First-Line Anti-Bacillary Drugs – Experience in the Sintra Region
CO 021. Effect of preoperative home-based exercise training on quality of life after lung cancer surgery: a randomised controlled trial
CO 022. Concordance between anatomic staging and pathological staging in lung cancer
CO 023. Robotic-assisted thoracic surgery (rats) for lung cancer: a single center experience
CO 024. Lorlatinib in Pulido Valente Hospital: our experience

Comunicações não foram incluídos no momento da publicação e por isso não seguem a paginação.
Communications were not included at the time of publication and for that reason, they do not follow the pagination.

CO 004. SEVERE TOXICITY TO FIRST-LINE ANTI-BACILLARY DRUGS – EXPERIENCE IN THE SINTRA REGION

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Introduction: Tuberculosis is a prevalent infection worldwide, whose treatment is crucial to reduce mortality and contagion. However, adverse reactions (AR) secondary to first-line anti-tuberculosis drugs are common and can be severe, leading to its suspension, which affects the effectiveness of the therapy and the course of tuberculosis.
Methods: Retrospective study of patients followed in the first 6 months (January-June 2023), after the opening of the Center for Pneumological Diagnosis (CPD) in Sintra, with severe AR secondary to first-line anti-tuberculosis drugs, in active and latent tuberculosis that required discontinuation of treatment.

Results: From 301 patients followed for tuberculosis (152 active and 149 latent) were identified in the first 6 months of 2023 at the Sintra CPD, with 7% (n = 20) presenting severe AR to first-line anti-tuberculosis drugs that led to their suspension. The majority were female (75%, n = 15), on average they were 53 years old, 35% (n = 7) were from a tuberculosis endemic country, and 15% (n = 3) had human immunodeficiency virus. In 70% (n = 14) of the cases they corresponded to latent tuberculosis (10 by contact with an index case, 2 by screening in the context of biological therapy and 2 by occupational health screening of health professionals). The remaining 30% (n = 6) had active tuberculosis: pulmonary (n = 3, 2 of them with cavitations), disseminated (n = 2) and ocular (n = 1). As for the cases of latent tuberculosis, treatment with isoniazid was discontinued in 100% of the cases, on average after 2.2 months of treatment: 12 due to hepatotoxicity (transaminases above 5 times the upper limit of normality), 1 due to musculoskeletal toxicity and 1 for skin toxicity (rash and angioedema of the lips). It is noteworthy that 42% of the

patients who developed hepatotoxicity had risk factors: other hepatotoxic drugs (n = 2), alcoholic habits (n = 2), and infection with the hepatitis C virus (n = 1). Patients restarted rifampicin therapy a median 1.2 months later, uneventfully. Patients with active tuberculosis discontinued therapy, on average 2.8 months after initiation, in 50% of cases during the maintenance phase. Discontinuation occurred due to hepatotoxicity (n = 3, 1 case due to transaminases above 3 times the upper limit of normality and gastrointestinal symptoms), hematological toxicity (hemolytic anemia) and due to skin toxicity due to intense pruritus (n = 1) and hypersensitivity reaction after the first dose (n = 1), the latter requiring desensitization with hospitalization. Therapy was restarted after an average of 1.5 months, with good tolerance. It should be noted that hepatotoxicity to isoniazid (n = 2) and rifampicin (n = 1), hematological toxicity to isoniazid (n = 1), and skin toxicity to pyrazinamide (n = 1) were identified.
Conclusions: There was an important discontinuation rate of first--line anti-tuberculosis medications in a short period, most of which occurred after 2 months of treatment. Hepatotoxicity was the main cause of discontinuation of first-line anti-tuberculosis drugs, with isoniazid being the drug most frequently associated with complications. The delay found in the treatment of active and latent tuberculosis may constitute a public health risk.

Keywords: *Anti-tuberculosis drugs, Severe adverse reactions. Tuberculosis.*

CO 021. EFFECT OF PREOPERATIVE HOME-BASED EXERCISE TRAINING ON QUALITY OF LIFE AFTER LUNG CANCER SURGERY: A RANDOMISED CONTROLLED TRIAL

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Introduction: Preoperative exercise training is strongly recommended to improve clinical outcomes after lung cancer surgery. However, its effectiveness to prevent the decline in postoperative quality of life (QoL) is unknown. This study aimed to investigate whether preoperative home-based exercise training (PHET) prevents the decline in QoL after lung cancer surgery.
Methods: A multicentre, randomised controlled trial was conducted at 4 hospitals in Portugal. Patients awaiting lung cancer surgery (clinical stage I-IIIA), were randomly assigned to PHET or control group (CG). The PHET combined aerobic and resistance training, with weekly telephone supervision. Primary outcome was global QoL assessed with the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire C-30 (EORTC QLQ C-30). Secondary outcomes were EORTC QLQ C-30 functioning and symptom subscales. Outcome assessments were conducted at three timepoints: baseline (i.e., before randomization) (T0), 1-5 days pre-surgery (T1) and 1-month post-surgery (T2). A factorial repeated measures analysis of variance (ANOVA) was conducted to compare groups over time. The proportion of patients with clinical deterioration after surgery was analysed based on the minimal importance difference and Chi-squared test.
Results: 38 patients (67.6 ± 9.2 years old, 65.8% male) were included (PHET n = 19, CG n = 19). The mean duration of the PHET was 3.6 ± 1.1 weeks. A significant group X time interaction was found on global QoL (p = 0.003). Significantly and clinically relevant differences between groups were observed on global QoL at pre-surgery (mean difference (MD) 13.1 points; 95%CI, 2.3–23.8; p = 0.019) and post-surgery (MD 13.6 points; 95%CI 1.8–25.5; p = 0.025), favoring the PHET. After surgery, the proportion of patients who reported a clinical deterioration was significantly lower in the PHET group compared with the CG on global QoL (PHET: 26.3% vs CG: n = 78.9%; p = 0.001), physical function (PHET: 21.1% vs CG: 73.7%; p = 0.003), role function (PHET: 10.5% vs CG: 52.6%; p = 0.005), social function (PHET: 15.8% vs CG: 52.6%; p = 0.017), pain (PHET: 26.3% vs CG: 63.2%; p = 0.022) and appetite loss (PHET: 5.3% vs CG: 36.3%; p = 0.017).
Conclusions: The integration of a home-based exercise training program in the preoperative care of lung cancer patients may improve symptom management and prevent the detrimental impact of surgery on QoL.

Keywords: *Lung cancer. Surgery. Exercise training. Quality of life.*

CO 022. CONCORDANCE BETWEEN ANATOMIC STAGING AND PATHOLOGICAL STAGING IN LUNG CANCER

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Introduction: Clinical staging (cTNM) is crucial in determining the therapeutic approach; however, it has limitations determined by the sensitivity of diagnostic tests. Pathological staging (pTNM) provides more accurate decisions regarding subsequent therapy and prognosis. An inaccurate staging can determine less appropriate therapeutic decisions with a loss of benefit for the patient.
Objectives: The aim of this study is to evaluate the concordance between cTNM and pTNM in patients undergoing surgery with curative intent for lung cancer.
Methods: Retrospective study that includes patients diagnosed with primary lung cancer and proposed for surgery with curative intent between January 2017 and December 2022. Data were collected through the review of clinical records, including multidisciplinary consultation meetings, complementary diagnostic tests, and anatomopathological reports. For patients who underwent neoadjuvant therapy, clinical restaging was considered after completing neoadjuvant treatment. The staging established in the 8th Edition of The TNM Classification for Lung Cancer was applied. The concordance between cTNM and pTNM was evaluated using the Cohen's Kappa Index.
Results: A total of 187 patients were included, with 108 (57.8%) being male and a median age of 68.0 [43-87] years. Histologically, 141 (75.4%) were adenocarcinomas, 31 (16.6%) were squamous cell carcinomas, and 15 (8.0%) were neuroendocrine tumors. cTNM staging was performed based on chest computed tomography (CT), positron emission tomography (PET/TC), and cranial imaging. Among them, 73 (39.0%) underwent Endobronchial Ultrasound (EBUS/EUSb). Regarding cTNM, 69.5% (n = 130) of cases were classified as stage I, 21.4% (n = 40) were stage II, and 9.1% (n = 17) were stage IIIA. Within the study sample, 144 (77.0%) patients underwent lobectomies, 30 (16.0%) had sublobar resections, 8 (4.3%) had bilobectomies, and 3 (1.6%) had pneumonectomies, all with associated lymphadenectomy. In 2 cases, surgery with curative intent was converted intraoperatively to exploratory thoracotomy due to the presence of pleural and/or pericardial implants (pTNM – stage IVA). The concordance between cT and pT is 69.2% (Kappa = 0.48), while the concordance between cN and pN is 81.1% (Kappa = 0.36). The overall concordance between cTNM and pTNM is 69.0% (Kappa = 0.43), with 11 (5.9%) cases being overstaged and 47 (25.1%) cases being understaged. Among the subgroup of patients who were understaged, 10 (5.3%) had pTNM of stage IIIB or IVA.

Conclusions: The concordance between cTNM and pTNM in the present sample is considerable, chowing values similar to those reported in the literature. However, a more accurate clinical staging could have led to different treatment decisions in 5.3% of the cases. This indicates that there is a need to improve the precision of clinical staging in these patients.

Keywords: *TNM staging. Lung cancer.*

CO 023. ROBOTIC-ASSISTED THORACIC SURGERY (RATS) FOR LUNG CANCER: A SINGLE CENTER EXPERIENCE

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Introduction: Robotic-Assisted Thoracic Surgery (RATS) has gained a foremost role in lung cancer surgical treatment. At present, when minimally invasive surgery is the accepted gold standard, this system is presented as an extension of the surgeon's hands to improve the precision of surgical procedures. The surgical gesture is translated by the robot, ensuring, after having overcome the respective learning curve, greater range of motion and tremor filtration, better technical accuracy during surgical dissection and suturing and high-quality 3D visualization. The primary endpoint of this study is to report our experience in the treatment of lung tumors through RATS surgical approach.
Methods: We retrospectively analyzed all patients with suspected malignant disease who underwent robotic-assisted thoracic surgery in our institution since the introduction of the surgical program in March of 2022 until June of 2023. To this day, a total of 49 RATS procedures were performed in our center.
Results: 16 patients were eligible, with female predominance (75%) and a mean age of 56,1 (± 17,8) years. Following complete oncologic evaluation, all tumors were classified preoperatively as stage I, according to 8th TNM classification, of which 81% were stage IA and the remaining were stage IB. Pulmonary function tests confirmed an overall normal respiratory capacity with mean values of FEV1 of 101% (± 45,9) and DLCO of 85% (± 41,6). Thus, patients were referred directly to surgery without requiring neoadjuvant treatment. RATS requires three ports for the robotic articulated arms and one port for the surgeon. 9 patients (56%) underwent lobectomy whereas 8 (44%) had segmentectomy. In 63% of patients, surgery was performed on the right lung. The procedures took a mean time duration of 188 (± 39,4) minutes and a median intraoperative blood loss of 50 mL (20-100 mL). The conversion rate to open surgery was 6% since one case required pulmonary artery plasty due to tumoral invasion. All patients had one pleural thoracic drain placed after the procedure. The mean drainage time was 2,0 (± 1,3) days and mean hospital stay was 2,2 (± 1,9) days. Pain control was achieved with oral medication after the first postoperative day. No evidence of mortality or major surgical complications were accounted. A complete surgical resection (R0) was achieved in 94% of cases. Pathology examination revealed 13 cases (81%) of non-small cell lung carcinomas and 1 case of breast cancer metastasis. In 2 patients, no malignant disease was found after careful assessment. As such, final oncologic staging detailed 8 tumors in stage IA, 1 tumor in stage IB, 3 in stage IIB e 1 tumor in stage IIIA (pT1aN2R0). Upstaging was registered in 3 patients (18,8%).
Conclusions: The launch of the RATS program in our center marked the start of its availability in the public health system and, after more than a year past, it showcases encouraging results. Our study reveals short drainage and hospitalization times, low blood loss, easy pain management and low morbidity, in accordance with literature. RATS is established as a safe and viable approach for lung procedures, demonstrating equivalent surgical time-efficacy when compared to VATS.

Keywords: *Lung cancer. Robotic-Assisted Thoracic Surgery. Minimally invasive surgery. Operative outcomes.*

CO 024. LORLATINIB IN PULIDO VALENTE HOSPITAL: OUR EXPERIENCE

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Introduction: Lorlatitnib is a selective third-generation tyrosine kinase inhibitor (TKI) of anaplastic lymphoma kinase (ALK) and c-ros oncogene 1 (ROS1) with good CNS penetration and activity against most known ALK-resistance mutations.
Objectives: Evaluate the efficacy and safety of Lorlatinib in the treatment of patients with advanced non-small cell lung cancer (NSCLC), ALK or ROS1 mutated, followed at the center.
Methods: A retrospective analysis of clinical records of patients that were submitted to treatment with Lorlatinib was performed. This study evaluated the epidemiological characteristics of population and assessed the response and tolerance of the treatment according to the targe mutation, using the JAMOVI statistical software (V2.4.1).
Results: Eleven patients with advanced NSCLC, all adenocarcinomas, 8 with ALK rearrangement (73%) and 3 with ROS1 rearrangement (27%) were included. At baseline, they presented a mean age of 54.8 ± 15.3 years and an ECOG performance status (PS) between 0-2. Most patients were female (n = 7, 64%) and only 3 reported significant previous smoking habits (27%, CT > 15 UMA). All patients were previously submitted to at least one treatment with another TKI. Among the "ALK-positive" patients: 3 were previously treated with Alectinib alone (37%); and 5 with at least two TKIs (63%). The overall objective response rate (ORR) was 38%, with no significant difference between the 2 groups (p > 0.05 in the Fisher's exact test). An intracranial response (OIRR) was obtained in 60% of patients with brain metastases at baseline. Median progression-free survival (PFS) was 4.7 months (95%CI, 2.8-NA months). Most cases developed systemic progression (71%, 5 out of 7 cases). Median overall survival (OS) was 8.7 months (95%CI, 4.8-NA months), with a calculated 1-year survival rate (SR) of 43% (3 of 7 cases). All "ROS1 positive" patients previously underwent Critozinib with or without chemotherapy and/or immunotherapy. In this group, the ORR to Lorlatinib was 33%, and it was not possible to calculate the OIRR due to the absence of brain metastases. PFS of disease was 19.1 months (95%CI, 13.6-NA months). The OS of this group was 19.1 months (95%CI, 13.6-NA months) and the 1-year SR was 100% (2 out of 2 cases). There was at least one treatment-related adverse reaction in 91% of patients (n = 10), most of which were mild to moderate (70% NCI CTCAE Grade 1-2). The most common serious adverse reactions (Grade 3-4) were due to changes in lipids metabolism (n = 5, 46%) and psychiatric disorders (n = 3, 27%), leading to discontinuation of treatment in one case (4%) and its interruption in two others (9%).
Conclusions: The results of our analysis are based on a small number of patients as a limitation in their extrapolation but overlapped with the studies that led to the approval of Lorlatinib in ALK-positive patients. In ROS1-positive patients who progress after Crizotinib the therapeutic options are limited, however Lorlatinib may represent a viable option. More prospective and multicentric studies are desirable to confirm these data and to optimize future therapeutic lines.

Keywords: *Lorlatinib. Lung cancer. ALK And ROS1.*