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PC 001. LUNG CANCER: A CHALLENGE IN THE COVID-19 PANDEMIC

M. Cardoso Tavares, F. Fernandes, R. Natal, S. Braga, J. Ribeiro, F. Jesus, F. Silva, É. Almeida, L. Ferreira

Serviço de Pneumologia, ULS Guarda.

Introduction: The COVID-19 pandemic has been a permanent threat to public health, demonstrating a significant impact on the management of cancer patients. Studies have established a correlation between the reallocation of health services and professionals during the pandemic and the decrease in the number of new diagnoses of lung cancer, which could contribute, in the future, to diagnoses at more advanced stages.
Objectives: To assess the impact of the COVID-19 pandemic on the diagnosis of lung cancer patients in the Pulmonology Service of a tertiary hospital.
Methods: A retrospective comparative study was carried out between two groups of patients. Group 1 (G1) represents patients diagnosed with lung cancer before the COVID-19 pandemic (01/01/2018-12/31/2019) and Group 2 (G2) represents patients diagnosed with lung cancer during the COVID-19 pandemic (01/01/2020-12/31/2021). The following variables were evaluated: gender, age, smoking history, histological type, and staging.
Results: A total of 218 patients were included, 99 in G1 and 119 in G2. The mean age was 74 ± 10.29 years in G1 and 72.67 ± 11.77 years in G2 ($p < 0.05$). Regarding gender, the most frequent was male, with a prevalence of 63.6% in G1 and 74.8% in G2 ($p < 0.05$). In terms of smoking history, there was a higher incidence of smokers/ex-smokers: 71.7% in G1 and 70.6% in G2 ($p < 0.05$). Regarding the histological type, both in G1 and G2, the most frequent was Adenocarcinoma, followed by Squamous Cell Carcinoma and Small Cell Carcinoma, with a prevalence of 64%, 19.1% and 11.2%, respectively, in G1 and 46.8%, 22.3% and 17%, respectively, in G2 ($p < 0.05$). Most patients were diagnosed at stage IV in both G1 (66.7%) and G2 (60.4%) ($p < 0.05$). The second most frequent stage was stage III in both G1 (15.6%) and G2 (20.8%). Only 17.8% of patients in G1 and 16% of patients in G2 were diagnosed at early stage (I and II) ($p < 0.05$).
Conclusions: The COVID-19 pandemic, due to the overload in health services, conditioned delays in the diagnosis of cancer patients. In our Pulmonology oncology consultation, based on the statistical analysis performed, there were no statistically significant differences in the stage of lung cancer at diagnosis. We attribute this result to the fact that we ensured the normal functioning of the Pulmonology oncology sector during the COVID-19 pandemic, with no suspension or postponement of first consultations.

Keywords: *Lung cancer. COVID-19 pandemic. Adenocarcinoma.*

PC 002. REAL-WORLD CHALLENGES IN FIRST-LINE TREATMENT OF METASTATIC EGFR-MUTATED NON-SMALL CELL LUNG CANCER

I. Barreto, G. Moura Portugal, A. Machado, F. Ferro, A.S. Vilariça, D. Hasmucrai, P. Alves, C. Bárbara

Centro Hospitalar Universitário Lisboa Norte.

Introduction: The third-generation EGFR-TKI osimertinib was recently introduced as first-line treatment for patients with locally advanced or metastatic non-small cell lung cancer (NSCLC) with activating EGFR mutations.
Objectives: To characterize the clinical outcomes and mutation profile of a cohort of patients using osimertinib as monotherapy in Portugal.
Methods: This is a real-world, retrospective, single-center study (Lisbon-Portugal), including a cohort of patients diagnosed with EGFRm NSCLC between 01/2005 and 12/2021. Treatment initiation with osimertinib occurred between 11/2018 and 03/2022 (last follow-up: 06/2022). Data collected from medical/administrative records included: demographics, tumor histology, disease stage, mutations. Progression free-survival (PFS) and overall survival (OS) were evaluated. Descriptive statistics with categorical variables described as frequencies were conducted. Pearson chi-square test was used to evaluate variables' association. Survival analyses were based on Kaplan-Meier method (results reported as median with interquartile range [IQR]). Analyzes were performed in SPSS-Statistics v.24.0 (p-values below 5% considered statistically significant).
Results: Overall, 33 patients mostly women (n = 21, 63.6%), white (n = 31, 93.9%), non-smokers (n = 22, 66.7%), with a median age of 70.0 (IQR 63.0-74.0; min-max: 45.0-97.0) were included. All cases were of adenocarcinoma. Most patients presented an ECOG perfor-

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ing chronic sarcoidosis, 60 patients were identified, 51.7% female and with a mean age of 51.7 ± 15.1 years. In this subgroup, the definitive diagnosis involved the use of biopsy in 40% of the cases. In the last evaluation, Scadding stage 0 was observed in 48.3%, stage I in 15%, stage II in 16.7%, stage III in 5% and stage IV in 15%. The mean ACE at diagnosis and at the last assessment was 83.03 ± 48.31 and 58.23 ± 26.55, respectively. The mean soluble IL2 receptor assay was 1,569 pg/ml (N 458-1,997 pg/ml). The mean lymphocytosis in BAL was 37.40 ± 22.18%, with a CD4/CD8 ratio of 5.3 ± 5.79. The respiratory functional study revealed a mean FVC at diagnosis of 93.8% ± 22.6 and 92.5% ± 13.3% at the last evaluation, while the mean DLCO at diagnosis was 74.9% ± 17.3% and 75.8% ± 19.1% in the last assessment. Regarding the current treatment, 32% are under surveillance only, 31.7% are under prednisolone, 11.7% with hydroxychloroquine, 16.7% with methotrexate, 1.7% with leflunomide, 1.7% with azathioprine, 1.7% infliximab and 3.3% with nintedanib. Of the global cohort of stage IV chronic sarcoidosis, 22.2% demonstrated criteria of progressive fibrotic disease in the previous 24 months.
Conclusions: The data presented illustrate the heterogeneity in the biological behavior trend and severity of sarcoidosis.

Keywords: *Sarcoidosis. Granulomatous disease. Progressive fibrotic disease.*

PC 021. FUNCTIONAL IMPAIRMENT IN PEOPLE WITH INTERSTITIAL LUNG DISEASES: IS ONE MEASURE ENOUGH?

C. Dias, A. Machado, C. Paixão, M.A. Mendes, P.G. Ferreira, A. Marques

Lab3R-Respiratory Research and Rehabilitation Laboratory, School of Health Sciences, University of Aveiro (ESSUA). iBiMED-Institute of Biomedicine, Department of Medical Sciences, University of Aveiro.

Introduction: Interstitial lung diseases (ILD) comprehend a large group of lung diseases that include disease settings associated with sustained progression and leading to respiratory failure, decreased functional status and premature death. Functional status can be defined as an individual's ability to perform normal daily activities required to meet basic needs, fulfill usual roles and maintain health and well-being. It includes functional capacity, i.e., an individual's maximum capacity to perform daily life activities in a standardized environment; and functional performance, i.e., the activities people actually do during the course of their daily life. Decreased functional status is the most frequent reported impact by people with ILD and is associated with increased dependence on others, exacerbations and hospital admissions. Yet, little is known how functional status is impaired in people with ILD.
Objectives: To explore functional impairments in people with ILD.
Methods: A cross-sectional study was conducted with people with ILD. Age, sex, body mass index (BMI) and lung function were collected. Functional capacity was assessed with the 1-minute sit-to-stand test (1-minSTS), the 6-minute walk test (6MWT) and quadriceps maximum voluntary contraction (QMVC). Functional performance was assessed with the London Chest Activities of Daily Living (LCADL). Participants' functional capacity was classified as impaired if the 1-minSTS, 6MWT and/or QMVC values were below 70% of predicted. Participants' functional performance was considered impaired if above the cut-off point of 28% of the LCADL. Descriptive statistics were performed.
Results: In total, 156 people with ILD (65 ± 13 years; 51.9% female; BMI 28.7 ± 6.1 kg/m^2; FVC 79.2 ± 20.1%predicted; DLCO 55.4 ± 21.2%predicted) participated. ILD diagnosis included fibrosis hypersensitivity pneumonitis (43%), idiopathic pulmonary fibrosis (24%), connective tissue disease-associated ILD (14%), dust-related (1%) and others (17%). Functional capacity was impaired in 55.3%, 23.8% and 41.8% of the sample assessed with the 1-minSTS, 6MWT and QMVC, respectively. Functional performance was impaired in 48.5% of people with ILD.
Conclusions: A large proportion of people with ILD show impairments in functional status, i.e., in capacity, in performance or in both. Lack of impairment in one measure does not rule out functional status impairment. Patient-centered and comprehensive assessment of functional status seems vital to guide individually tailored interventions and improve this meaningful domain for the daily life of ILD patients.

Keywords: *ILD. Functional status. Functional capacity. Functional performance.*

PC 022. ABILITY TO IDENTIFY RISK OF FALLS OF THE BRIEF-BESTEST IN PATIENTS WITH INTERSTITIAL LUNG DISEASE

C. Paixão, A.S. Grave, P.G. Ferreira, M.A. Mendes, F. Teixeira Lopes, J. Coutinho Costa, D. Brooks, A. Marques

Lab3R-Respiratory Research and Rehabilitation Laboratory, School of Health Sciences (ESSUA) and Department of Medical Sciences of University of Aveiro.

Falls are one of the major causes of morbidity, healthcare utilisation and mortality, worldwide. Deficits in balance have been associated with an increased risk of falls in people with chronic obstructive pulmonary disease, who fall 3-5 times more than their healthy age-matched peers. Much less is yet known about the balance of individuals with interstitial lung disease (ILD) which are a highly disabling group of chronic respiratory diseases. The Brief-Balance Evaluation Systems Test (Brief-BESTest) is a comprehensive balance measure, which provides important information for tailoring balance training, however, its ability to identify risk of falls in people with ILD is still unknown. Thus, the aim of this study was to determine the discriminative ability of the Brief-BESTest in identifying people with ILD with high/low predicted risk of falls. A retrospective cross-sectional study was conducted with people with ILD. At inclusion, people with ILD had to be clinically stable (i.e., no history of acute cardiac condition, acute ILD exacerbation or other respiratory complications) in the previous month. A definition of falls (an unexpected event when you find yourself unintentionally on the ground, floor or lower level) was provided to participants. History of falls was investigated by asking participants two standardised questions: (1) "Have you had any falls in the last 12 months?" and, if yes, (2) "How many times did you fall down in the last 12 months?". Balance was assessed with the Brief-BESTest. Differences between people who suffered a fall and those who did not, in the previous year, were explored with independent t-tests. A receiver operating characteristics (ROC) curve analysis was used to assess the ability of the Brief-BESTest to differentiate between people with ILD with (≥ 1) and without (0) history of falls. The area under the curve (AUC), sensitivity, specificity and accuracy were also calculated. The optimal cut-off point was identified by the highest Youden index. Sixty-seven people with ILD (66 ± 12 years old; 38 [56.7%] female; FVC 80.8 ± 18.8%predicted; DLCO 56.8 ± 22.2% predicted) were included in the analysis. From these, 20 (29.9%) had, at least, 1 fall in the previous year. People who suffered falls were older (63 ± 10 *vs.* 72 ± 13 years, p = 0.015), had a worst DLCO (60.8 ± 21.3 *vs.* 46.8 ± 21.9% predicted, p = 0.032) and balance (Brief-BESTest 17.8 ± 5.2 *vs.* 13.5 ± 6.4 points, p = 0.012) at baseline than those who had not fallen in the previous year. A cut-off point in the Brief-BESTest of 15.5 points for risk of falls (AUC = 0.71; 95%CI 0.56-0.85; 65% sensitivity; 75% specificity; accuracy = 0.71) was found in people with ILD. The Brief-BESTest is a simple and comprehensive balance test able to discriminate patients with ILD with risk of falls. A cut-off of 15.5

points in the Brief-BESTest may be helpful to easily identify those at risk of falling, and implement tailored interventions to improve balance.

Keywords: *ILD. Brief-Bestest. Falls. Roc.*

PC 023. ABILITY OF THE CHESTER STEP TEST TO DETECT FUNCTIONAL IMPAIRMENT AND MORTALITY RISK IN PATIENTS WITH INTERSTITIAL LUNG DISEASE

C. Paixão, A. Alves, A.S. Grave, P.G. Ferreira, F. Teixeira Lopes, M.A. Mendes, J. Coutinho Costa, D. Brooks, A. Marques

Respiratory Research and Rehabilitation Laboratory (Lab3R), School of Health Sciences (ESSUA), iBiMED-Institute of Biomedicine and Department of Medical Sciences of University of Aveiro.

People with interstitial lung disease (ILD) often experience disabling symptoms, which impairs their functional capacity, further accelerating disease progression. The 6-minute walk test (6MWT) has been the most widely used field test to assess functional capacity and to discriminate the mortality risk in people with ILD. Nevertheless, its application across settings (e.g., patients' homes) is often limited due to the need of a 30 m corridor. Alternatives to assess functional capacity in these settings have been emerging, such as the 1-minute sit-to-stand test (1-minSTS) and the Chester step test (CST). However, the first does not allow exercise prescription. The CST is a simple and low-cost field test, which enables exercise prescription and requires minimal physical space to assess functional capacity. Its suitability to be used as a first-line screening tool to detect functional capacity impairment and mortality risk in people with ILD is however unknown. Thus, the aim of this study was to determine the discriminative ability of the CST in distinguishing people with ILD with or without functional impairment and low or higher risk of mortality. A retrospective cross-sectional study was conducted with stable (i.e., no history of acute cardiac events, acute exacerbations or other respiratory complications in the previous month) people with ILD. The following measures were collected: CST, 6MWT and 1-minSTS. A receiver operating characteristics (ROC) curve analysis was performed and area under the curve (AUC), sensitivity, specificity and accuracy were calculated. We determined a threshold for the CST to identify: i) functional impairment, based on published cut-offs of the percentage predicted of the 1-minSTS and the 6MWT (both 70% predicted); and, ii) mortality, based on different established cut-offs of the 6MWT (250, 330 and 350 m). The optimal cut-off points were identified by the highest Youden index. Eighty-three people with ILD (65 ± 14 years old; 45 [54.2%] female; FVC 77.7 ± 17.9%predicted; DLCO 50.3 ± 20.7% predicted) were included in the analysis. The cut-off points of the 1-minSTS (AUC = 0.73; 95%CI 0.63-0.84; 81% sensitivity; 65% specificity; accuracy = 0.72) and 6MWT (AUC = 0.91; 95%CI 0.82-0.99; 88% sensitivity; 83% specificity; accuracy = 0.86) identified a cut-off of 40.5 steps in CST to detect functional impairment in people with ILD. All cut-offs of the 6MWT identified a cut-off of 36 steps on the CST (6MWT < 250m: AUC = 0.89; 95% CI 0.80-0.97; 86% sensitivity; 80% specificity; accuracy = 0.80; 6MWT < 330m: AUC = 0.97; 95%CI 0.93-1; 96% sensitivity; 81% specificity; accuracy = 0.90; 6MWT < 350m: AUC = 0.93; 95%CI 0.86-1; 98% sensitivity; 70% specificity; accuracy = 0.90) to detect increased risk of mortality. Healthcare professionals may now use cut-offs of 40.5 and 36 steps in the CST to accurately detect people with ILD with functional impairment and/or at increased risk of mortality, respectively, which may contribute to the implementation of tailored and preventive interventions to improve functional capacity and reduce the risk of mortality in this population.

Keywords: *ILD. Chester Step Test. Functional impairment. Mortality. Roc.*

PC 024. UNVEILING COMMON MOLECULAR PATHWAYS LINKED TO ILDS WITH PROGRESSIVE FIBROSING PHENOTYPE

R.F. Santos, P. Caetano Mota, O. Sokhatska, C. Gouveia Cardoso, D. Coelho, N. Melo, A. Terras Alexandre, A. Carvalho, J.M. Pereira, S. Guimarães, C. Souto Moura, M. Soares, L. Delgado, A. Morais, M. Saraiva, H. Novais-Bastos

i3S Porto.

Progressive fibrosing ILDs (PF-ILDs) comprise a heterogeneous group of lung disorders associated with high morbidity and mortality, that exhibit a continuous worsening phenotype despite standard treatment. Our knowledge on the molecular determinants underlying this relentless fibroproliferative behavior and acute exacerbations are still scarce and call for fundamental studies. PF-ILDs are multifactorial conditions, which involve complex interactions between host genetics and different environmental triggers, shaping the immune milieu that ultimately drives the fibrotic cascade in a susceptible patient. Most research has been focused on idiopathic pulmonary fibrosis (IPF) and has unveiled both genomic variants of risk and specific transcriptional signatures associated with accelerated clinical courses. A previous work from our group revealed that the variant MUC5B rs35705950 T allele is associated with pulmonary fibrosis in both IPF and non-IPF cases in a Portuguese cohort, when compared with healthy controls, highlighting the hypothesis that PF-ILDs may share fibroproliferative common pathways. Herein, taking advantage of our extensive ILD patients' cohort, we observed that the cellular distribution in bronchoalveolar lavage (BAL) are comparable between IPF and fibrotic hypersensitivity pneumonitis (HP) patients. Interestingly, stratifying the fibrotic HP patients according to the MUC5B rs35705950 genotype we observed an increase in the proportion of macrophages in BAL fluid in individuals carrying the minor allele together with a slight decrease in neutrophils, eosinophils, and lymphocytes in the same patients. Additionally, soluble biomarkers are being quantified by bead-based immunoassays both in serum and in BAL collected at baseline and during acute exacerbations. Our results showed high levels of pro-inflammatory and tissue damaged-associated cytokines in patients with worst clinical outcomes. Further studies, such as the correlation of the transcriptional profiles and the host respiratory microbiome analysis, are ongoing. With this methodology, we expect to gain deeper insight into PF-ILDs common pathways, with potential use in early stratification of disease risk and paving the way for new targeted therapies.

Keywords: *Progressive fibrosing ILDS. Genetic variants. Biomarkers.*

PC 025. PLEURAL EFFUSION: AN UNUSUAL PRESENTATION OF SARCOIDOSIS

L. Balanco, P. Gonçalo Ferreira

Centro Hospitalar e Universitário de Coimbra.

Introduction: Sarcoidosis is a systemic granulomatous disease of unknown etiology that involves predominantly the lungs and mediastinal lymph nodes. Although other organs are frequently affected, sarcoid pleural involvement is relatively uncommon. Here, we describe a case of sarcoidosis presenting with pleural effusion and pachypleuritis.

Case report: A 24-year-old male was admitted to the hospital with dyspnea, fever and left pleural effusion. The patient had been well until 4 weeks before this evaluation, when dry cough and dyspnea emerged. Four days before hospital admission, cough and dyspnea worsened and fever developed. Physical examination was noticeable for low grade fever, tachycardia and muffled breath sounds on left lower lung field. Thoracic ultrasonography confirmed moderate volume nonseptated pleural effusion (PE). Thoracentesis revealed