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EXPOSED POSTERS

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PE 001. ALPHA-1 ANTITRYPSIN DEFICIENCY - AUGMENTATION THERAPY IN A CHILD WITH PULMONARY ENPHYSEMA

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Introduction: Alpha-1 Antitrypsin Deficiency (AATD) is a rare genetic pathology that can affect several organ systems, most often the respiratory system. At the pulmonary level it is essentially associated with chronic obstructive pulmonary disease, emphysema and bronchiectasis.
Case report: Male, 17 years old. Non Smoking. Diagnosed with AATD at 9 month of age (AAT measurement - 50 mg/dL). Genetic study identified ZPI genotype, associated with serum AAT levels < 35% of normality, with the Z allele being the most frequently associated with emphysema. At the age of 10, he was referred to a Pulmonologist for dyspnea on exertion, daily productive cough and poor weight evolution (BMI 12 kg/m^2, < 3rd percentile). From the complementary study, the following stood out: mild airflow obstruction (FEV1 71.3%), with negative bronchodilation test; on chest CT, a slight shift of the mediastinum to the left was observed due to loss of lung volume, panlobular emphysema and varicose and cystic bronchiectasis. After one year of follow-up, the patient remained symptomatic, with persistent airflow obstruction (FEV1 77.7%) and air trapping (RV 181.8%), despite optimized bronchodilator therapy. Given the severity of the symptoms, the need to preserve pulmonary function and to delay the progression of the disease, in April 2016, augmentation therapy was started at a dose adjusted to weight (2 g). Since the beginning of treatment, the patient realized 151 sessions without complications. There was symptomatic improvement, better weight evolution and absence of exacerbations. In reassessment after three years of treatment, it was found: resolution of airway obstruction (FEV1 86.6%) and improvement in airtrapping (RV 168.4%); imagiological improvement seen on chest CT.
Discussion: Augmentation therapy with intravenous administration of human alpha-1 proteinase inhibitor is the most efficient way to increase serum and pulmonary AAT levels, and it aims to slowing the progression of emphysematous disease. Although augmentation therapy is only indicated for patients who meet specific criteria, namely age ≥ 18 years, with this case we found that the treatment in pediatric age can be essential and change the natural course of the disease, improving the prognosis of these individuals. Further studies are needed to assess the benefit of replacement treatment in this population.

Keywords: *Alpha-1 antitrypsin. Emphysema.*

PE 002. NOT ALL THAT WHEEZES IS ASTHMA

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Introduction: Asthma is a heterogeneous disease, characterized by the presence of respiratory symptoms such as cough, dyspnoea, chest tightness and wheezing, which vary in intensity and over time. Despite the typical presentation, other diseases can cause symptoms similar to those of an asthma exacerbation. The differential diagnosis of asthma is extremely important, as it has important prognostic and therapeutic implications.
Case report: We describe the case of a 86-year-old woman with a history of asthma diagnosed at 27 years of age, controlled with an inhaled corticosteroid (ICS) and long-acting beta-agonist (LABA) association. She went to the emergency department (Er) with symptoms of wheezing and stridor for the last 3 months. She was observed by an otorhinolaryngologist, who performed a laryngoscopy which was normal. She was discharged with medicated with Montelukast, Aminophylline, oral Prednisolone and a new ICS + inhaled LABA association. Five days later, she returned to the ER for persisting symptoms, associated with a state of greater anxiety. She was apyretic, tachycardic and sweaty on phyisical examination; pulmonary auscultation showed rude breath sounds, inspiratory and expiratory wheezing, dispersed rhonchus and increased expiratory time. The chest X-ray showed no significant changes, and the analytical study revealed leukocytosis, increased C-reactive protein and hyperglycemia. She was admitted to the Pulmonology Ward with the diagnosis of an asthma exacerbation due to acute tracheobronchitis. During hospitalization, despite the resolution of the infectious complication,

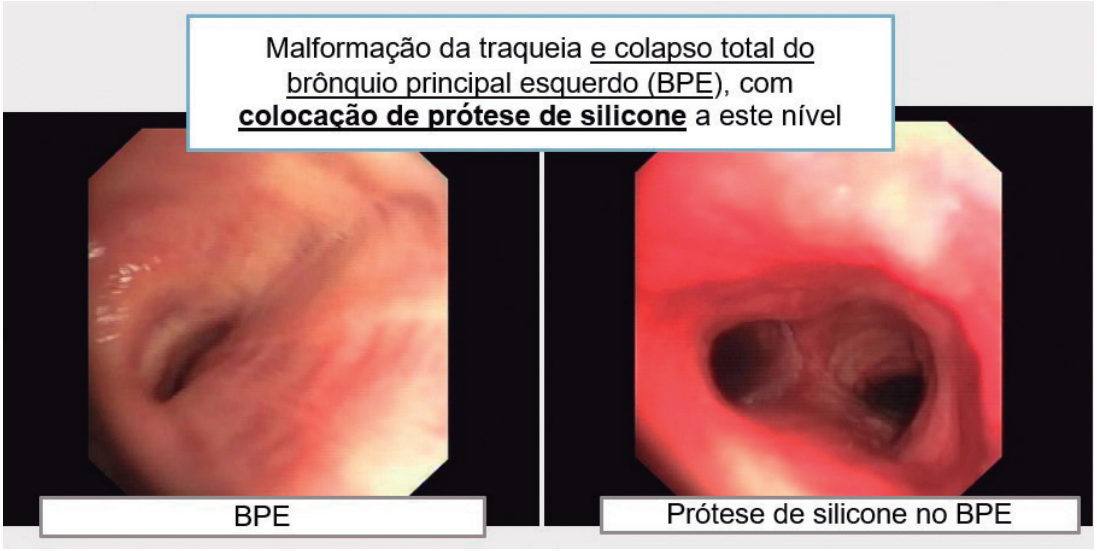

Figure PE 002

therapeutic optimization and starting respiratory physiotherapy, she maintained stridor and wheezing episodes. She then underwent bronchofibroscopy, which revealed a stenosis of 50% of the middle third of the trachea, associated with dynamic collapse. In view of this finding, she subsequently underwent rigid bronchoscopy, which showed a congenital malformation of the trachea and total collapse of the left main bronchus; a silicone prosthesis was placed at this level. The procedure took place without immediate complications and led to the complete resolution of symptoms, namely stridor.
Discussion: Asthma exacerbation's are common, and generally easy to diagnose. However, the persistence of symptoms after therapeutic optimization, or the appearance of other respiratory sounds, such as stridor, should lead to the suspicion of alternative or additional diagnoses.

Keywords: *Asthma. Wheezing. Stridor.*

PE 003. NUTCRACKER ESOPHAGUS AS A DIFFERENTIAL DIAGNOSIS OF ASTHMA EXACERBATION - A CLINICAL CASE REPORT

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Introduction: The effect of pregnancy on women who do have asthma is unpredictable. Asthma exacerbations occur in one third of pregnant women. The control and severity of pre-gestational asthma are predictors of severity during pregnancy. Nevertheless, symptoms such as dyspnea and retrosternal chest pain require etiological distinction, exclusion of potentially fatal causes and symptomatic control.
Case report: The authors report the case of a female patient, Pakistani nationality, non-smoker, diagnosed with asthma in childhood and previously asymptomatic. she went to the emergency department (ED), 20 weeks pregnant, due to progressive worsening dyspnea which improved after bronchodilator therapy. The patient was discharged and ICS + LABA was recommended as a maintenance controller medication in combination with intranasal corticosteroids and oral antihistamines. A few weeks later and under previously prescribed therapy, the patient went to the ED several times for dyspnea and de novo retrosternal chest pain. Retrosternal pain was described as a sensation of episodic chest tightness, associated with heartburn and worsened postprandially, without irradiation to the upper limb, neck or jaw or association with effort. The symptoms were repeatedly assumed to exacerbate asthma. Thereafter the patient was admitted to the hospital for diagnostic evaluation. The physical examination was normal. GSA (aa): pH 7.69, pO2 125.8 mmHg, pCO2 15 mmHg, HCO3 24.4 meq/L. Laboratory study: iron deficiency anemia (Hb 10.5 mg/dl), normal leukogram, CRP < 0.50; D-dimers, cardiac biomarkers e ECG were normal. Chest radiography without abnormalities. However, during hospitalization, the patient had recurrent episodes of dyspnea, vomiting, heartburn and a sensation of chest tightness. The diagnostic strategy included: transthoracic echocardiography and spirometry that had no relevant abnormalities and esophageal manometry that showed "peristaltic contractions of increased amplitude in the middle and distal esophagus" - suggestive of hypercontractile esophagus (nutcracker esophagus). Once a diagnosis of hypercontractile esophagus has been made a calcium channel blocker (nifedipine), proton pump inhibitors (PPI) and antiemetic was started. After that, the patient presented a reduction in the frequency and exuberance of symptoms and was discharged after 10 days. On an outpatient basis, she continued therapy, with complete resolution of symptoms and normal gestational evolution.
Discussion: Dyspnea and retrosternal chest pain "tightness" are nonspecific symptoms. it is important to exclude potentially fatal causes. After excluding them, the etiological study should be extended to fewer common diagnoses. In this specific clinical case, there were factors complicated the diagnostic evaluation, such as pregnancy, the non-specificity of symptoms and the language barrier. In view of recurrent episodes of dyspnea, retrosternal pain of non-cardiac characteristics, vomiting and heartburn, the hypothesis of esophageal motility disorder arose. Esophageal manometry corroborated the diagnosis, allowing the initiation of targeted therapy and subsequent resolution of symptoms without damage to maternal or fetal health.

Keywords: *Nutcracker esophagus. Asthma. Dyspnea. Retrosternal chest pain.*

PE 004. BIOLOGIC THERAPIES IN SEVERE ASTHMA - A 12-MONTH EVALUATION

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Introduction: Often in patients with severe asthma disease control is difficult to achieve, often requiring the regular use of systemic

corticosteroids, which entails significant health risks due to its side effects. In the last decade, the benefit of monoclonal antibodies has been widely demonstrated, namely through symptom control, reduction in exacerbations and in systemic corticosteroid dose. We pretend to evaluate the real life efficacy of these therapies on severe asthma patients, in the first 12 months of treatment.
Methods: Retrospective study, including severe asthma patients followed at our hospital centre, under omalizumab (Xolair™) or mepolizumab (Nucala™) for at least 12 months. Benefit evaluation was performed through clinical parameters (number of exacerbations and hospital admissions, symptom control through the CARAT questionnaire, and daily systemic corticosteroid dosage) and functional parameters (FEV1, FVC and FEV1/FVC ratio). The exacerbation and hospital admission numbers, as the mean daily systemic corticosteroid dosage and the CARAT questionnaire were evaluated in the 12 months prior and after initiating treatment. The functional study was performed between the ninth and 15th month, except one patient at the sixth month. The parameters were evaluated at both moments of the study in all patients, except the CARAT questionnaire and the functional study, which were only available at both moments in eight and 12 patients, respectively.
Results: A sample of 14 patients was obtained, eight under omalizumab and six under mepolizumab. The mean age at treatment initiation was 57.4 ± 17.6 years, majority females (71.4%), and mostly non-smokers (85.7%). Asthma was diagnosed after 40 years old in 28.6%, and there were eight patients with allergic asthma and 12 with eosinophilic asthma (overlap in six). Obesity was present in 35.7%, nasal polyposis in 28.6%, and urticaria in 14.3%. Also we found 57.1% of the patients to suffer from at least one corticosteroid side effect. At 12 months of treatment there was a significant difference in the reduction of the number of exacerbations (2.6 vs 0.8, p = 0.001), in total CARAT score improvement (21.0 vs 25.9; p = 0.005), and more specifically in the lower airway symptoms (11.4 vs 15.6; p = 0.007), and in the mean daily systemic corticosteroid dose reduction (2.2 vs 0.0 mg; p = 0.001). Although without statistical significance, we observed a hospital admission reduction (0.4 vs 0.0; p > 0.05) and a upper airway CARAT score improvement (9.6 vs 10.3; p > 0.05). The 12-month functional evaluation did not show significant improvement. On average, there was an improvement of 27.5 ml and 2.6% predicted (p > 0.05) in FEV1, and an improvement of 165 ml and 6.6% predicted (p > 0.05) in FVC. The FEV1/FVC ratio decreased 1.33.
Conclusions: Prior to biological therapy the patients in this cohort showed a high average number of exacerbations and a reasonable symptom control, however the majority were still requiring a regular dose of systemic corticosteroid. The treatment with monoclonal antibodies showed benefit in reducing the number of exacerbations and improving lower airway symptom control, while simultaneously allowing for a significant reduction of the daily systemic corticosteroid dosage.

Keywords: *Severe asthma. Omalizumab. Mepolizumab.*

PE 005. ASTHMA PATIENTS' OPINION ON VIRTUAL VISITS

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Introduction: Due to the Coronavirus disease 2019 (COVID-19) outbreak and the emergency state in Portugal, telemedicine visits were implemented in all country as an alternative to in-person visits.
Objectives: With this study we aimed to establish asthma patients' general satisfaction with the quality of health care provided by virtual visits (either video or telephone visits).
Methods: A questionnaire (9 questions) was published on the Facebook page of the Portuguese Association of Asthmatics. It was available online for general self-reported asthmatic patients to answer during one month, starting on 11st May 2020. The survey only allowed one answer per registered user.
Results: We obtained fifty-five responses. Patients showed satisfaction with communication with providers (> 88%), but still one-half evaluated virtual visit as inferior when compared to in-person visits. One third of the patients attributed a classification of 6 or less (0-10 scale, 0 being the worst and 10 the best consultation possible). Nevertheless, most of the patients would either recommend it or use this kind of medical visits in the future, even outside the actual pandemic context. Patients also referred some important limitations, such as lack of physical examination and the fact that the medical visit was more impersonal. Only 27% had technical issues accessing virtual visits. In an open answer question, positive aspects were also named, such as virtual visits being practical and avoiding the need to move to the hospital.
Conclusions: Our study highlighted that small changes could further increase patients' satisfaction, adherence and confidence in telemedicine visits. Although some limitations, virtual visits are generally well accepted by asthmatic patients and it might be a good alternative for in-person visits.

Keywords: *Asthma. COVID-19. Telemedicine. Survey.*

PE 006. EFFECT OF OFF-LABEL DUPILUMAB IN SEVERE STEROID REFRACTORY ASTHMA – A CASE REPORT

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Introduction: Dupilumab is a monoclonal antibody that inhibits interleukin (IL)-4 and IL-13 by blocking the IL-4 receptor. In Portugal, it is available for type 2 severe asthma patients refractory to maximal optimized therapy through an early access program. We describe the case of a severe asthma patient who was started on Dupilumab despite off-label criteria.
Case report: A 21-year-old woman with severe steroid refractory asthma since 2017 and a documented allergy to methylprednisolone was proposed for an off-label trial of Dupilumab, despite no evidence of type 2 inflammation, but considering the severity of the clinical situation with vital risk. The patient had previously showed failure to maximal optimized therapy, including other biological agents (Omalizumab and Reslizumab), maintaining frequent hospitalizations due to asthma exacerbations and a need for increasing doses of oral corticosteroids. A baseline disease evaluation was performed before the beginning of Dupilumab and repeated at the eighth month appointment. The initial Immunoglobulin E was 19 IU/mL. There was a slight increase in the peripheral blood eosinophil count before and eight months after the beginning of Dupilumab (100 cells/μL and 160 cells/μL, respectively). The patient was on systemic corticosteroid therapy (30 mg/day of deflazacort) and the daily dose was maintained eight months after the beginning of Dupilumab. Since the patient is unable to perform pulmonary function tests, there is no data regarding fractional exhaled nitric oxide (FeNO) levels. Regarding the symptoms and quality of life scores, assessed before and eight months after the beginning of Dupilumab, an improvement was observed in the ALQ (with scores of 19 and 16, respectively) and in the upper airway section of CARAT (with scores of 7 and 8, respectively). However, there was a reduction in the CARAT lower airway section (with scores of 9 and 0, respectively) and in the health status visual analogue scale (score of 25% vs 20%). There was no change in the EuroQoL-5D (score of 15). Considering hospitalizations due to asthma exacerbations, the duration of hospital stay decreased after Dupilumab (48 days vs 29 days), with a ratio of 6 days/month and 3.6 days/month, respectively. On the second administration of Dupilumab, there was a need to refer the patient to the emergency department to be monitored closely due to symptomatic worsening in the preceding days with an early dis-

charge and, therefore, there was no need for admission on a Pulmonology ward. No adverse effects were registered at the eighth month efficacy evaluation.
Discussion: In this patient, despite the lack of improvement in bronchial symptoms, Dupilumab prescribed as an off-label regimen revealed a marked decrease in the duration of hospital stay due to exacerbations and a positive safety profile.

Keywords: *Severe asthma. Biological agents. Dupilumab.*

PE 007. SELF-ADMINISTRATION OF BIOLOGICAL TREATMENT IN SEVERE ASTHMA: DOCTOR AND PATIENT AGREE?

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Introduction: Recently, several biological agents for severe asthma have been approved for self-administration on outpatients. However, there are no studies analysing clinician's perspective and clinician-patient agreement regarding this type of administration.
Objectives: Clinician-patient agreement assessment regarding self-administration of biological treatment in an outpatient.
Methods: An observational study was conducted based on the application of a multiple-choice question regarding self-administration of biological treatment from the perspective of the patient and his assistant pulmonologist. A convenience sample was studied, regarding patients followed in the Day Hospital unit of Pulmonology of a central hospital, under biological treatment for asthma.
Results: This study included 37 patients with a mean age of 48.8 ± 18.3 years (18-77), 43.5% were male. When asked about the possibility of self-administration of outpatient treatment, most patients (64.9%) agreed, 21.6% were against it and 13.5% assumed a neutral position. According to the questionnaire carried out to the clinician, most agreed with out-patient self-administration process (91.9%), disagreed in 5.4% and were in doubt in 2.7%. Clinician and patient were concordant when responding affirmatively to this new method of administration in 64.8% of cases. On the other hand, in 16.2%, the doctor supported this scheme for a specific patient who refuted this possibility. There was no situation in which the patient agreed with self-administration and the clinician rejected. The Kappa coefficient, used to assess agreement between clinician-patient, revealed a reasonable agreement rate for self-administration in an outpatient setting (kappa = 0.305, $p < 0.05$). A logistic regression analysis showed that the probability of clinician-patient agreement was higher in those patients under 65 years (OR 8.3, $p < 0.05$) and when biological treatment was administered less than 5 years ago (OR 6.9, $p < 0.05$). The type of biological agent and the interval of administrations were not influential factors in the doctor-patient agreement ($p > 0.05$). From clinician's point of view, most barriers to self-administration could be overcome with appropriate training in eligible patients, along with other types of support (printed material in 89% and digital in 46%). However, individual training was not a very common request in patients' responses (23%), with preference to digital and printed materials.
Conclusions: Self-administration of biological therapy in the studied population is seen positively by patients and doctors with a reasonable agreement rate. The agreement was greater in patients under 65 years of age and under biological therapy for a shorter time, which may reflect greater confidence regarding self-administration in younger age groups. On the other hand, clinician and patient appear to disagree on the type of support needed. These results suggest that the clinicians can play an important role in raising awareness of self-administration training in eligible patients.

Keywords: *Severe asthma. Biological therapy.*

PE 008. THE POSITIVE IMPACT OF BENRALIZUMAB THERAPY IN THE CONTROL OF SEVERE EOSINOPHILIC ASTHMA - REGARDING TWO CLINICAL CASES

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Introduction: Benralizumab is one of the most recently approved therapeutic strategies for adjunctive maintenance treatment in patients with severe eosinophilic asthma. It is characterized, in particular, by being a humanized monoclonal antibodies that binds to the alpha subunit of the IL-5 receptor, leading to apoptosis of eosinophils. Given its recent introduction into clinical practice, there are few real-life cases described in the literature. Objective: to share the experience of using benralizumab (30 mg SC every 4 weeks for the first 3 administrations and thereafter every 8 weeks) in two cases of uncontrolled severe eosinophilic asthma (level 5 therapy according to GINA recommendations).
Case reports: Case 1- Male, 58 years old, weaver and ex-smoker of 20 years, followed by a Pulmonology consultation for severe non-atopic asthma and bronchiectasis, requiring maintenance oral corticosteroids to obtain better control of symptoms and lung function. Prior to the start of benralizumab therapy, he had peripheral eosinophilia (10% - 1.100/uL), FEV1 58% (2.06L), 4 exacerbations in the last year, Asthma control test (ACT) 9 and deflazacorte 6mg daily intake. Case 2- Female, 58 years old, operational assistant, obese, non-smoker, with a history of non-allergic eosinophilic asthma accompanied by important symptoms, compromising her aptitude to perform functional respiratory tests. After excluding other potential causes of non-control of the disease, she was proposed for therapy with benralizumab. At that time, she had eosinophilia of 2,000/uL (persistent elevation in serial blood counts), 2 exacerbations in the last year, ACT 8 and was completing a cycle of systemic corticosteroid therapy with deflazacorte. In both cases, 8 weeks after the first administration, there was a marked reduction in the blood eosinophil count (0% - 0.0/uL) and a marked improvement in symptoms, with no exacerbations or use of relief medication.. In case 1, oral corticosteroid therapy was discontinued and the aim was to improve lung function (FEV1 pre-bronchodilation 111.5% (3.23 L). Asthma control was maintained throughout the subsequent evaluations, with no record of relevant adverse effects. Currently, patients are over 40 weeks of follow-up after the first administration of benralizumab 30 mg SC 8/8 weeks, registering ACT of 22, without exacerbations.
Discussion: There are few cases of severe eosinophilic asthma described in the literature that have more than 36 weeks of follow-up since the first administration of benralizumab, which is why the authors decided to share their experience through the two clinical cases presented. Both illustrate how quickly this biological therapy determined depletion of blood eosinophils and improved asthma control. The positive effects seem to be observed in a sustained manner over time and are evidenced objectively by the reduction in the need for systemic corticosteroid therapy and the number of exacerbations, as well as by the improvement of lung function.

Keywords: *Severe eosinophilic asthma. Benralizumab.*

PE 009. PNEUMONECTOMY AS A BRIDGE TO LUNG TRANSPLANT

E. Seixas, A. Amorim

C do Baixo Vouga.

Introduction: Bronchiectasis are the abnormal airway dilation. Respiratory infections are one of the most common etiologies. Some cases maintain clinical stability, but others, several complications characterize the clinical course of these patients, often culminating in lung transplantation. The objectives in the follow-up of these patients are symptom control, quality-of-life improvement and re-

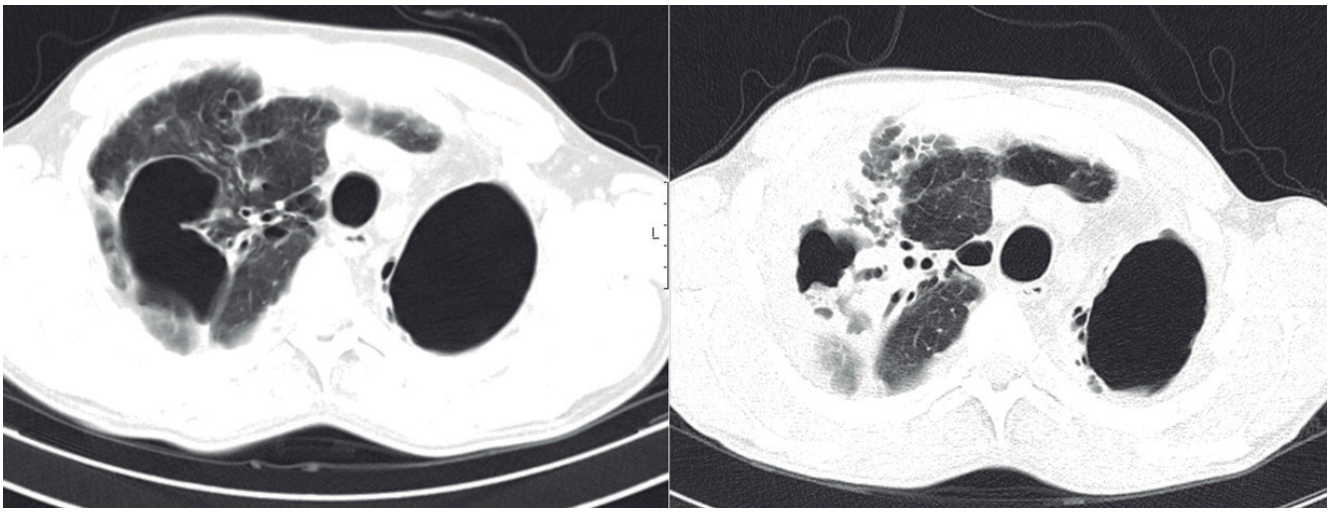

Figure PE 009

ducing the number and severity of exacerbations with the associated repercussions on lung function.

Case report: Male patient, 43-year-old, non-smoker with a son and with a medical background of measles pneumonia at 3 years and several pulmonary infections. Referred to a Pulmonology outpatient clinic with complaints (last 3 years) of deterioration of the general condition (weight loss-9 kg), increased sputum volume and dyspnea. Chest-CT with loss of volume on the left, multiple cystic bronchiectasis and large apical bubble; cystic bronchiectasis in RUL and cylindrical bronchiectasis in the middle lobe and LLL. Sweat tests, genetic study of CFTR mutations and autoimmunity were negative. Immunoglobulins (subclass) and alpha-1 anti-trypsin were in the normal range. Immunological study for Aspergillus was negative. Functionally: FVC-2.05L (45%), FEV1-1.36L(35%), Tiffenau-index-0.66, FEF 25-75-17%, TLC-4.47L (69%), RV-2.30L (134%) and DLCOSB-72%.Blood gas analysis showed PaO2-74.1mmHg, PaCO2-44.9 mmHg and desaturation in 6-minute-walking-test (425 meters, initial SpO2-96% and final-82%). A diagnosis of post-infectious bronchiectasis (measles pneumonia) was assumed. The patient remained stable after therapeutic optimization, in a respiratory rehabilitation program and nutritional support. No chronic infection. In October/2012, the patient had complains of worsening dyspnea, increased sputum volume (sometimes hemoptoic) and weight loss (5 kg). Chest radiography showed in RUL, new consolidation with loss of volume, a hypertransparent area inside and pleural thickening. Chest-CT showed, on the right, areas of "mosaic perfusion" and exuberant bronchiectasis, particularly in the apical region with a cavity with nodular images inside it-mycetomas. Specific-IgG were high for Aspergillus and positive precipitins. Diagnosis of chronic pulmonary aspergillosis was assumed and itraconazole started. The patient had subsequent worsening of oxygenation with criteria for portable oxygen concentrator and long-term-oxygen treatment. He started evaluation for lung transplantation with inclusion on the waiting list in May/2015. Due to the presence of multiple exacerbations, he started azithromycin. In 2016, due to the recurrence of hemoptysis, arterial embolization was performed. After a subsequent increase in Aspergillus-specific IgG, itraconazole was replaced by voriconazole. It was isolated Pseudomonas aeruginosa in sputum in an acute exacerbation and accomplished ciprofloxacin. Due to reappearance, an erradiation attempt was made with ceftazidime and tobramycin and inhaled colistin, suspending after due to intolerance (bronchospasm). In 2017, he performed a left pneumonectomy for infectious control. The postoperative period was complicated by infectious complications and hypercapnia, initiating bilevel-ventilation. He is currently clinically stable, awaiting lung transplantation in a rehabilitation program.

Discussion: This case emphasizes the importance of more serious cases being followed up in specialized clinics, as well as the need for regular follow-up/monitoring, which allows early diagnosis and intervention of complications. This case illustrates a patient with several complications throughout the follow-up and the importance of multidisciplinary assessment. Despite the functional/radiological severity and previous complications, it is possible to maintain clinical stability.

Keywords: *Bronchiectasis. Measles. Pneumonectomy. Transplant.*

PE 010. CHRONIC MUCOCUTANEOUS CANDIDIASIS – A FAMILIAL CASE THAT GOES BEYOND SKIN

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Introduction: Chronic Mucocutaneous Candidiasis (CMC) is a rare and heterogeneous entity that manifests itself through recurrent and/or refractory cutaneous, mucosal and nail lesions caused by infections with Candida species, being Candida albicans the most frequently found etiological agent. Recently, it has been associated with other anomalies of the vascular, digestive and respiratory systems, such as recurrent pneumonia, with pneumatoceles and bronchiectasis occurrence. The majority of patients with CMC present innate or adaptative immune system defects, envolving particularly Th17 cell function and its anti-fungal activity. This immune system anomalies are frequently connected to primary immunodeficiency cases.

Case report: 60 year-old woman with a history of recurrent Candida albicans infections since childhood. Besides skin, nail, oral and genital infections, there is reference to clinical worsening after adolescence with recurrent pneumonias, progressive respiratory insufficiency and bronchiectasis, leading up to left inferior lobectomy at age 20. During the last 6 years, the patient developed complaints of dysphagia in context of fungal esophagitis, demanding two Gastroenterology admissions for endoscopic esophageal dilation. This patient is followed in Pneumology specialty consultations for more than 20 years because of the described clinical history, currently maintaining a respiratory rehabilitation program and treatment with fluconazole, acetylcysteine and inhaled formoterol. Pulmonary function tests showed a moderate obstructive syndrome with reduced diffusing capacity and chest computed tomography revealed varicose bronchiectasis in both left superior and middle lobes. In 2014, the patient was referred to Alergy and Immunology consultation and a CD3/CD8 cell deficit was identified. After the patient's daughter and niece started to present similar symptoms, even though in a milder form, genetic sequencing of CARD9, CLEC7A, IL17F and TRAF3IP2 was performed with no pathogenic mutations being found. Currently, the patient fits in the moderate bronchiectasis group of the Bronchiectasis Severity Index (BSI), and is clinically stable, with 2 infectious exacerbations

in the past year and criteria for Haemophilus influenza colonization in sputum samples.
Discussion: Although it is rare, CMC is an important cause of morbidity, making its recognition of huge value for the genetic study of patients and their family counseling. The identification of other host immune risk factors that may cause infection susceptibility, should also be taken into consideration, allowing the development of direct approaches for the timely treatment of this condition.

***Keywords**: Chronic mucocutaneous candidiasis. Bronchiectasis.*

PE 011. PET-CT FINDING IN A SMALL CELL LUNG CANCER PATIENT – ANOTHER CAUSE?

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Introduction: Positron emission tomography-computed tomography (PET-CT) scan has been successfully used in detecting various cancers, since tumour cells usually have high glycolytic rates, however several benign diseases may also show increased accumulation of fluorodeoxyglucose (FDG). One of the most frequent causes of unilateral vocal cord paralysis is malignancy, most commonly lung cancer, due to the involvement of recurrent laryngeal nerve (RLN). The non-paralysed contralateral vocal cord can show a compensatory activity, as it tries to achieve glottic closure. This augmented activity can lead to an increased local glucose consumption, and asymmetric amplified FDG avidity on the contralateral side of the impaired vocal cord. The authors present the case of a lung cancer patient with a false positive PET-CT scan due to increased workload of the right vocal cord as it compensates for the paralyzed contralateral vocal cord.
Case report: A 60-year-old man, current smoker of 30 pack-year, without relevant medical history, presents with edema and superficial venous circulation of the left upper limb (LUL), he also presented dysphonia for the last two months. His thoracic computed tomography (CT) showed a left hilar mass (9 cm diameter), with signs of invasion of the chest wall, multiple nodules in the left upper lobe, mediastinal adenopathic conglomerates with involvement of the supraaortic vessels, and left cervical and axillary lymphadenopathies. After CT-guided transthoracic biopsy of the lung mass, a small cell lung cancer, stage IV, was diagnosed. The patient initiated chemotherapy with Carboplatin + Etoposid with progressive improvement of LUL symptoms, but dysphonia persisted. Otorhinolaryngology performed a laryngoscopy and paralysis of the left vocal cord was documented and so, it was assumed that the left RLN was involved by lung carcinoma. He presented a nearly complete radiological response after three cycles of chemotherapy, and sustained an excellent response after six cycles, with thoracic CT showing a clear decrease of the hilar mass, pulmonary nodules, and mediastinal adenopathies. To evaluate residual neoplastic disease, and then consider consolidative thoracic radiotherapy, after the sixth cycle of chemotherapy, the patient underwent a PET-CT scan that showed bilateral mediastinal-hilar hypermetabolic adenopathies (maximum standardized uptake value - SUVmax between 2 and 5.3), but also an asymmetric hypermetabolism in the right vocal cord (SUVmax 9.8). Therefore, to exclude neoplastic involvement of the right vocal cord, a new laryngoscopy and biopsy of the right vocal cord were performed: no macroscopic changes were documented, and anatomopathological study revealed laryngeal mucosa with reactive changes and no signs of neoplastic involvement.
Discussion: Asymmetric hypermetabolism in the larynx can be observed due to a primary tumour, metastatic lesions, but also due to a benign cause, as paralysis of the contralateral vocal cord. Laryngoscopy is more proper to confirm the diagnosis of vocal cord paralysis and to exclude a synchronous glottic tumour or metastasis. The authors believe that knowledge of this false-positive PET-CT scan result is important, as it may change the staging, treatment and prognosis of the patient.

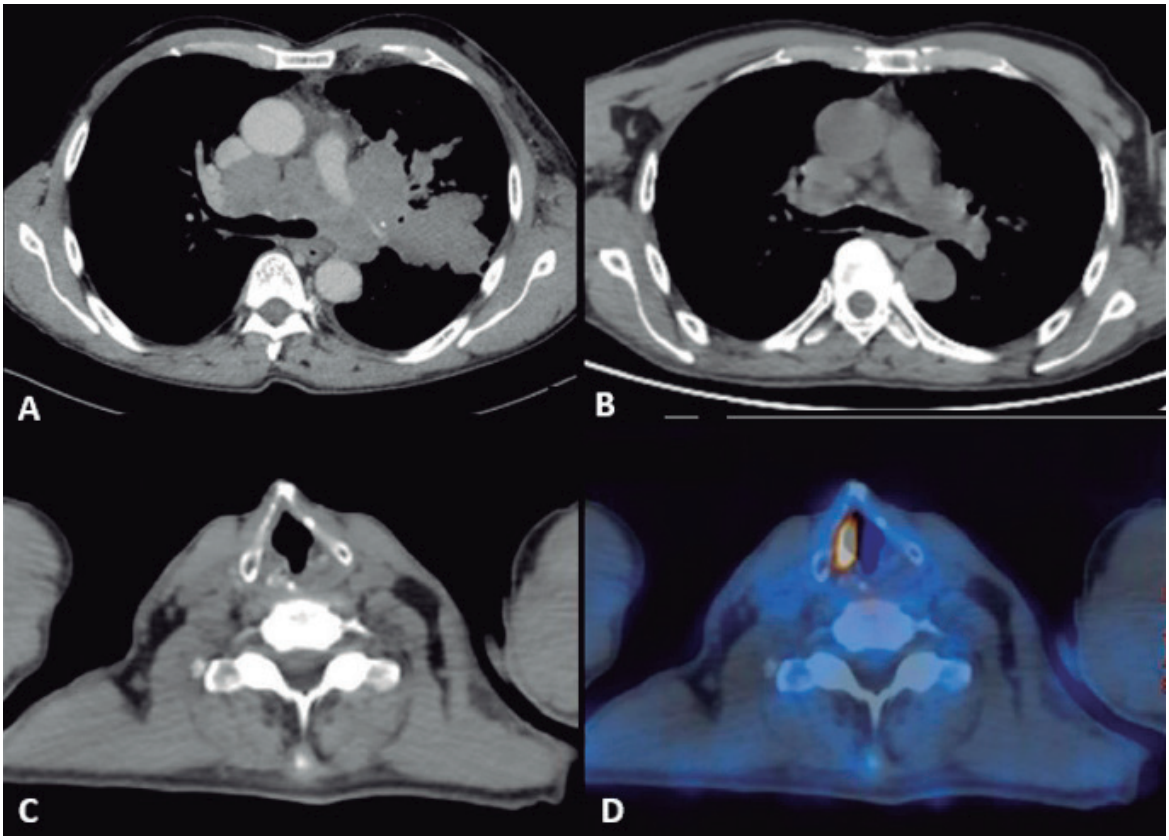

Figure PE 011

Keywords: *Positron emission tomography-computed tomography. Small cell lung cancer. False-positive finding. Unilateral vocal cord paralysis.*

PE 012. CAVITATED SINGLE PULMONARY NODULE - A FALLACIOUS CASE

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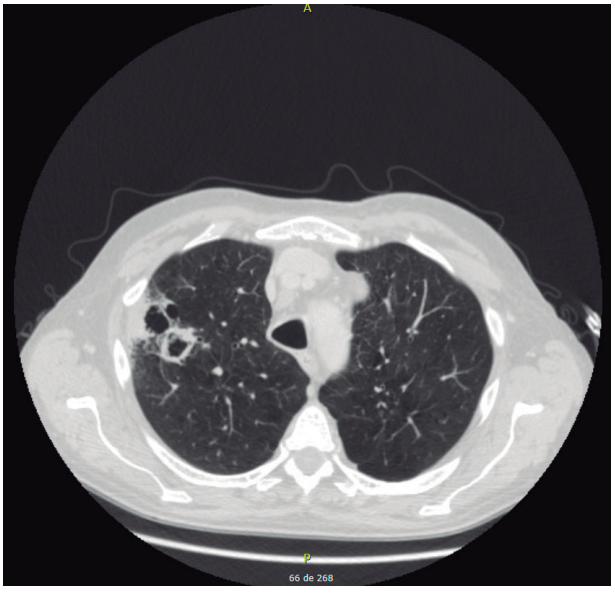
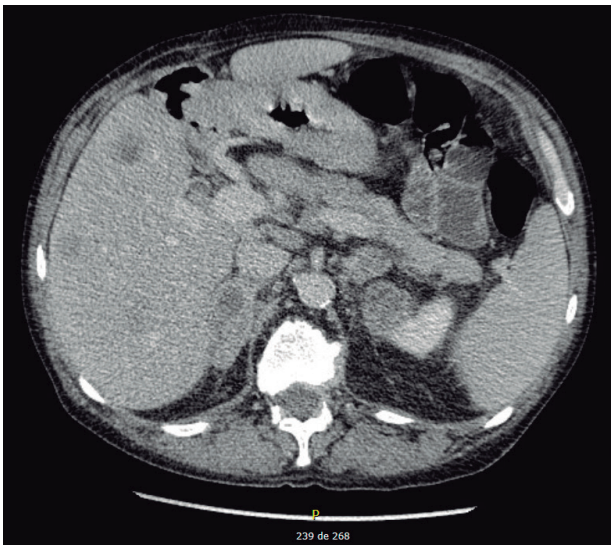
Introduction: The lungs are the most frequent target organs for metastases. Most malignancies can metastasize to the lungs, the most common tumors being colorectal, bladder, breast, prostate, thyroid cancers, sarcoma and melanoma. In the presence of a single pulmonary nodule, it is more likely to be a primary carcinoma than solitary metastasis. In the latter case, the neoplasms most frequently involved are sarcoma or melanoma. We describe a case of a single metastatic cavitated pulmonary nodule.
Case report: A 52-year-old man with a relevant history of treated pulmonary tuberculosis, active smoking (40 UMA), moderate ethanolic habits and chronic liver disease, went to the emergency department for complaints with 2 months of evolution of tiredness, asthenia, anorexia, dyspnea on exertion and unquantified weight loss. Analytically, he presented anemia (9.4 g/dL), thrombocytosis (693,000 × 10^9/L), increased inflammatory parameters (CRP 30 mg/dL). Gasometrically, he presented hypoxemia (pO2 59 mmHg, FiO2 21%). Pulmonary auscultation showed no changes. He was admitted to the Pulmonology Service for etiological study. The high resolution computed tomography (HRCT) imaging study showed a solid mass cavitated in the upper lobe of the right lung (40 × 45 mm). The liver was normal in size, with numerous secondary deposits. It also showed adrenal, renal, bone, thoracic, abdominal ganglionar and chest wall secondaryization. The diagnostic hypothesis of primary lung cancer with multiple metastasis was raised. Bronchofibroscopy was performed with bronchoalveolar lavage, which was not diagnostic. Patient subsequently performed a biopsy of a chest wall nodule that revealed solid/trabecular carcinoma, positive for CK7 and HepSA and negative for TTF1, CK20, CDX2 and napsin A, compatible with hepatocarcinoma metastasis. The patient was transferred to the Gastroenterology Service for follow-up. However, the general condition worsened significantly during hospitalization, eventually dying before starting treatment.





Discussion: This case demonstrates the heterogeneity of the presentation of neoplastic diseases, being able to mislead our clinical suspicion and, thus, delay diagnosis and targeted treatment, and recall the importance of keeping alert for differential diagnoses.

Keywords: *Single pulmonary nodule. Clinical heterogeneity.*

PE 013. PD-1 INHIBITORS IN THE LUNG CANCER TREATMENT - SINGLE CENTER ANALYSIS

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Introduction: The arrival of immunotherapy in recent years has revolutionized targeted lung cancer therapy.
Methods: Retrospective study of 24 patients with Lung cancer under PD-1 Inhibitor (Anti-PD1) from 2016 to 2019 in a single center with follow-up cut-off in September 2020 (mean follow-up of 22 months).
Results: Most of the 24 patients with lung cancer under Anti-PD1 were male (n = 18) and the mean age at diagnosis was 65 years. Four non-smoking patients and twenty ex-smokers or active smokers at the time of diagnosis with an average smoking burden of 34 pack-years. The anatomo-pathological study revealed: 16 patients with Lung Adenocarcinoma, 7 patients with Squamous cell carcinoma and 1 patient with Small cell carcinoma. 50% underwent treatment with Pembrolizumab (mean of 64% PDL-1 expression) and 50% underwent treatment with Nivolumab. The majority (58.3%) of the patients started Anti-PD1 with stage 4 neoplastic disease, 37.5% with stage 3b disease and only one patient in stage 2b. Regarding the therapeutic line, 25% started Anti-PD1 as the 1st line, 50% as the 2nd line and 25% as the 3rd line. The vast majority (70.8%) of patients started Anti-PD1 after poor response to Platinum-based combination chemotherapy, only one patient started Anti-PD1 after poor response to Erlotinib and 4 patients prior to the start of Anti-PD1 underwent surgery. One case revealed an infusional reaction after Nivolumab with mild pruritus without the need for permanent suspension of Anti-PD1. 50% of the patients presented some form of toxicity to Anti-PD1 treatment: six patients had pneumonitis (three grade 1 (G1) pneumonitis, one G2 and two G3), three had colitis (two with G1 colitis and one G3), one G1 arthralgia, one G2 skin toxicity and only one patient had G1 fatigue. Of the patients who presented toxicity of any degree, 66% definitively discontinued Anti-PD1, of which the patients with Colitis G3 stand out, who after temporary suspension, systemic corticotherapy and treatment with

Vedolizumab resumed the prior Anti-PD1 without a new toxicity record. On average, 10 cycles of Anti-PD1 were performed per patient. 50% discontinued Anti-PD1 due to disease progression, 29.2% maintained Anti-PD1 cycles to the present date, 12.5% suspended Anti-PD1 due to severe toxicity (G3/4) and 8.3% of the patients died without a diagnosis of oncological disease progression. We also highlight a mean of 10 months of progression free survival after initiation of Anti-PD1 and the 1-year overall survival of 79.2% after diagnosis.

Conclusions: In the total group of Lung cancer patients under Anti-PD1 was noted a higher percentage of severe toxicity (G3/4 = 12.5%) than expected (7-12%) and a lower record of fatigue associated to Anti-PD1 treatment (8% vs 16-24%). Also noteworthy are the two cases of severe toxicity with good response to targeted and supportive treatment with a safe reintroduction of Anti-PD1 and the high 1-year overall survival.

Keywords: *Pembrolizumab. Nivolumab. Lung cancer. Toxicity. Immunotherapy.*

PE 014. ORGANIZING PNEUMONIA AFTER SARS-COV-2 INFECTION

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Introduction: Organizing pneumonia (OP) is a non-specific pulmonary pathological response to several lesional mechanisms and it can result from secondary causes, such as infections, pharmacological toxicity, connective tissue diseases, etc., being called cryptogenic when no cause is identified. The authors present three clinical cases of OP after SARS-CoV-2 infection.

Case reports: Case 1: 67-year-old woman, with post-tuberculosis bronchiectasis and type 2 diabetes, admitted to the Intensive Care Unit (ICU) due to SARS-CoV-2 pneumonia complicated with severe ARDS, requiring invasive mechanical ventilation (MV) for 22 days. The chest CT on the 10th day of admission presented an OP pattern and peripheral pulmonary embolism. The patient was treated with methylprednisolone 1 mg/kg/day and therapeutic enoxaparin. Infectious complications: urinary tract infection caused by Escherichia coli; ventilator-associated pneumonia due to methicillin-sensitive Staphylococcus aureus; Pseudomonas aeruginosa bacteremia. Non-infectious complications: hyperkinetic delirium; subacute pancreatitis; pharmacologic hepatotoxicity. Presenting a favorable clinical course, she was transferred to the ward, with the possibility of tapering corticosteroids and weaning from oxygen therapy. At discharge, she was medicated with prednisolone 5 mg/day, with no need for supplemental oxygen. Case 2: 70-year-old man, former-smoker (70 pack-years), with COPD GOLD 3D and severe emphysema, admitted to the ICU due to SARS-CoV-2 pneumonia complicated with severe ARDS requiring invasive MV for 28 days and tracheostomy due to prolonged MV with difficult weaning. The chest CT on the 33rd day of admission presented an OP pattern. The patient was treated with methylprednisolone 1 mg/kg/day. Infectious complications: late-onset ventilator-associated pneumonia due to Pseudomonas aeruginosa with multiple organ dysfunction; persistent bacteremia due to extended-spectrum beta-lactamase producing Klebsiella pneumonia. He was extubated to spontaneous breathing through a tracheostomy and was transferred to the ward on the 37th day of admission. A physical and pulmonary rehabilitation program was implemented, with the possibility of weaning from oxygen therapy. At discharge, the patient was medicated with prednisolone 5 mg/day. Case 3: 73-year-old woman, with asthma, arterial hypertension, dyslipidemia and obesity, admitted to the ICU due to SARS-CoV-2 pneumonia with bacterial infection and acute kidney injury, complicated with severe hypoxemia requiring high-flow nasal canula oxygen for 2 days. The chest CT on the 10th day of admission presented an OP pattern. The patient was treated with methylprednisolone 1 mg/kg/day and underwent an intensive pulmonary rehabilitation program. Corticosteroids were tapered and she was discharged with prednisolone 40 mg/day, with no need for supplemental oxygen. In all cases, there was ICU-acquired weakness and severe myopathy, with the need for physical rehabilitation. In spite of the evolution to an OP pattern, in these three cases there was a favorable evolution with systemic corticosteroids, with a plan for progressive tapering in 6 months, according to clinical evolution.

Discussion: As described in the literature and illustrated in these clinical cases, some patients with SARS-CoV-2 pneumonia develop and OP pattern, whose sequelae and long-term evolution are yet unknown. Although its duration is not yet established, systemic corticosteroids play an essential role in the management of these patients. In the setting of myopathy, personalized physical and respiratory programs should be implemented.

Keywords: *Organizing pneumonia. SARS-CoV-2. Corticosteroids. Rehabilitation.*

PE 015. INTERSTITIUM DISEASES AND COVID-19: BEFORE AND AFTER THE INFECTION

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Introduction: The SARS-CoV-2 virus was identified as a cause of a potentially fatal pneumonia, COVID-19. It is assumed patients with chronic respiratory diseases are of high risk, not knowing the true impact of the infection after its resolution. The authors present two cases of interstitial lung disease before and after COVID-19.

Case reports: A 58-year-old male with idiopathic pulmonary fibrosis taking pirfenidone 801 mg tid, without pulmonary restriction or respiratory insufficiency. Usually asymptomatic, in March started complaining about having dry cough, ageusia, easy tiredness and fever with progressive worsening in two weeks. A CT was made that showed inter and intralobular septal thickening with traction bronquiectasis, with peripheral distribution and craniocaudal gradient, and basal honeycombing where bilateral ground glass opacities were noted. A SARS-CoV-2 swab was positive, the patient admitted to the Pulmonology Department. In 72h he presented worsening of tiredness and polypnea, with need to increment oxygen therapy. We instituted non invasive ventilation in CPAP mode, with posterior reduction of respiratory effort and oxygen therapy, performed during 9 days. After 23 days he was discharged asymptomatic, with PaO2 80.2 mmHg, and cure criteria. After 15 days, he started complaining of worsening dyspnoea, with tiredness at rest. He presented hypoxaemia (PaO2 82.2 mmHg with oxygen through nasal cannula). A new SARS-CoV-2 swab was positive, believed to be due to viral shedding of the previous infection. The patient was re-admitted assuming exacerbation of the pulmonary fibrosis. He repeated CT that revealed increased opacification in some areas already altered in the previous exam, with the same anatomic disposition. He was treated with prednisolone 40 mg for 5 days and discharged after 9 days with PaO2 67 mmHg. Three months after COVID-19, he reports dyspnoea mMRC 3, asthenia, adynamia, maintaining anosmia and ageusia. A revaluation CT showed a discrete progression of fibrosis, specially of the basal honeycombing. The second case is a 68-year-old male with interstitial lung disease under investigation, whose CT showed a reticular pattern with inter and intralobular septal thickening predominantly peripheral, subpleural and bilateral, with traction bronquiectasis, more evident in the inferior lobes. Previously asymptomatic, in April reported having fever, dry cough, myalgias, headaches and vomiting. He presented hypoxemic and a CT was made that revealed new ground

glass opacities with peripheral focal consolidation in the right superior lobe. After three swabs, COVID-19 was confirmed. He needed at most FiO2 24% and had a favourable evolution, being discharged after 11 days. Three months after, he complains about being asthenic and with dyspnoea mMRC 2; he feels some restrictions in daily activities non-existent before COVID-19. He awaits imaging and functional revaluation.
Discussion: The two patients, usually asymptomatic despite the interstitial disease, after COVID-19 had a meaningful decrease of the quality of life, that persisted after three months. There are needed studies to investigate the contribute of COVID-19 in the exacerbation or acceleration of the course of interstitial diseases. It becomes more important prevention in this group of patients.

Keywords: *COVID-19. Interstitial diseases. MMRC. Dyspnoea. Pulmonary fibrosis.*

PE 016. EXPECT THE UNEXPECTED - A CLINICAL CASE OF SEVERE RESPIRATORY SARS-COV2 INFECTION IN A PATIENT WITH ESTABLISHED DIAGNOSIS OF SEVERE ASTHMA

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Introduction: Evolving epidemiologic data during the COVID-19 pandemic have shed light on populations at risk for severe infection. The impact of asthma remains particularly controversial, ranging from protective effect to 3-fold risk for hospitalization. We present a case of COVID-19 infection in a patient with a clinical established diagnosis of severe asthma.
Case report: A 44-year-old man with a medical history of severe asthma, obstructive sleep apnea syndrome and secondary polycythemia presented to the emergency department (ED) with 1-day of fever, headache and generalized myalgias. His peak expiratory flow rate 1 month before presentation was at a baseline of 370 L/min, his spirometry showed moderate ventilatory obstruction (FEV1: 57%, FEV1/FVC: 64%) and his asthma was uncontrolled under high-dose ICS/LABA and LAMA. In the ED, he was febrile, hipoxemic (pO2 64.9 mmHg), with lung sounds audibly diminished. Chest X-ray examination revealed basal bilateral ground-glass attenuation. Blood tests presented with polycythemia (Hb 20 g/dL, Hct 59.3%), linfopenia, RCP of 73 mg/L, and no coagulation disorder. His COVID test result was positive and he was admitted to the hospital ward. Systemic corticotherapy, hydroxychloroquine and ritonavir/lopinavir were started. Despite treatment he began to exhibit signs of respiratory distress and increase in oxygen needs. He was started on non-invasive ventilation and quickly escalated to invasive mechanical ventilation (IMV). Because he presented with marked elevation of D-Dimers in blood tests, an Angio-TC of the thorax was requested and confirmed an extensive pan-lobar pulmonary embolism. He was started on low molecular weight heparin in a therapeutic dose adjusted to his body weight and was on IMV for a total of 5-days with 1 ventral period. As his breathing improved, he was extubated and initiated progressive weaning of oxygen supply with success. 10 days after starting anticoagulation therapy he presented with a hematoma of the right posterolateral abdominal wall associated with a progressive fall in hemoglobin (Hb) level. Computed tomography detected a voluminous hematoma of the right psoas muscle with 2 active arterial leaks. Anticoagulation was suspended, and selective embolization was performed with success. After 2 negative Covid tests, he was discharged to be re-evaluated by his pneumologist. 4 months after discharge the patient appeared to have his asthma controlled, with no diurnal or nocturnal symptoms. Imagiological evaluation showed favourable evolution of the bilateral pneumonia with resolution of the extensive pulmonary embolism. Spirometry and peak flow measurements showed improvement in lung function (FEV1: 60%, FEV1/FVC: 63%) and his diffusion capacity for carbon monoxide was within normal range (DLCOc: 94%, KCOc: 127%). Echocardiographic evaluation showed normal right heart function with no evidence of pulmonary hypertension (PSAP 28 mmHg). Analytically his Hb level was within normal range (14 mg/dL).
Discussion: Persistent lung function abnormalities are expected in patients who had a severe course of COVID-19, particularly those who required IMV. This clinical case is a particular example of successful clinical evolution despite the encountered severity and complications. A follow-up evaluation with a structured protocol visit will allow better understanding of the natural course of disease and identify new abnormalities early.

Keywords: *Severe asthma. COVID-19.*

PE 017. COVID-19 IN RESPIRATORY PATIENTS

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Introduction: Chronic respiratory ilnesses are among the main causes of morbi-mortality worlwide, and were the third cause of death in 2017. The infection by the new SARS-CoV-2 vírus has been confirmed in more than 25 million people by August, 2020. This disease (Covid-19) can have potentially devastating effects in the respiratory system and it is foreseable that people with previous respiratory ailments should have a worse course of disease. Although initial studies seemed to disprove this idea, later studies support it. We present 3 case reports of patients with previous respiratory ilnesses which were admitted and diagnosed with Covid-19.
Case reports: 66 years old man with history of COPD GOLD 2, chronic alcoholism, dyslipidemia and hypothyroidism, admitted after a fall with a fracture of the L1 vertebrae and the calcaneus. This patient was confirmed as SARS-CoV-2 positive at the admission screening and admitted. He had no respiratory insufficiency and normal blood workup. The patient had favourable clinical evolution with support therapy and tested negative for SARS-CoV-2 at the fifth day, beeing transferred to the Ortophedics Ward for continuation of care. The second patient was a 21 years old women with Controlled Asthma under treatment with inhaled corticosteroid and long-acting beta-2 agonist. She resorted to the hospital with dry cough, fever (39 ºC), chest pain and myalgias with 3 days of evolution. She was confimed SARS-CoV-2 positive and admitted. The patient had no respiratory insufficiency and had leukopenia in the blood workup. In the second day she reported headaches but without impaired mental status or meningism. Clinical evolution was favourable with resolution of initial complaints and without need of oxygenotherapy. The third patient was a 48 years old man with a history of disseminated and pulmonary tuberculosis in maintenance treatment phase, HIV and Hepatitis B infection, diabetes mellitus type 2 and arterial hypertension. He went to the hospital with shortness of breath, fever and fatigue with 1 week of evolution. At admission he had no respiratory insufficiency, slight cytolisis and chest X-ray had a reticular pattern bilaterally, more accentuated in the lower right lobe. At the first day after admission he developed partial respiratory insufficiency and started oxygenotherapy. He had a good response to therapy with resolution of the respiratory insufficiency and his complaints. Because of intermittent SARS-CoV-2 positive tests and no conditions to continue quarantine at home he was only discharged at the 47th day, clinically stable.
Discussion: There's still much to know about COVID-19 and its physiopathology, namely which patients will probably have a worse outcome. In regard to patients with previous respiratory illnesses, it seems they might have worse outcomes, but the extent to which this happens is still largely unknown. We presented

here three separate cases of patients with COVID-19 that had a benign clinical evolution despite having previous respiratory illnesses. More and larger studies are needed to fully understand the specific factors that predict a worse outcome in patients with COVID-19 and tailor personalized therapeutic strategies with that knowledge at hand.

Keywords: *COPD. Asthma. Tuberculosis. COVID-19.*

PE 018. PNEUMOMEDIASTINUM ASSOCIATED WITH SARS-COV2 DISEASE – PRESENTATION OF TWO CLINICAL CASES

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Introduction: Pneumomediastinum may occur secondary to barotrauma induced by non-invasive ventilation (NIV), specially in ARDS. In SARS-CoV2 disease (COVID-19) pneumomediastinum has been an associated complication and therefore the authors present two clinical cases of COVID-19 and pneumomediastinum.
Case reports: Case 1. A 76 years old man, former smoker, totally dependent on his daily activities is brought to the ER at 9/8/2020 for fever, dyspnea and diarrhea starting 2 days prior. At admission with partial respiratory failure (RF) with a PaO2/FiO2 ratio of 200, without signs of respiratory distress. From the diagnostic workup stood out: lymphopenia of 1.000 × 10^9/L, RCP of 17 mg/dL, procalcitonin of 1.13 ng/mL, D-dimers > 35,000 μg/L; SARS-CoV2 positive PCR test; Chest radiograph with bilateral insterstitial infiltrate with consolidative hypodensity on lower left lung. Patient was admitted for COVID-19 associated RF with probable bacterial co-infection and started empiric antibiotics and supplementary oxygen with 2 L/min nasal cannula. By 9th day of symptom develops respiratory distress with respiratory frequency > 35 cpm, a PaO2/FiO2 ratio of 111 for which is transferred to Pulmonology department to start NIV. Because of his priors NIV was his therapeutic ceiling, starting CPAP with a 12 mmH20 pressure and dexamethasone with improvement. At 18/8 undergoes Contrast-enhanced Chest-CT diagnosing a lobar pulmonary thromboembolism, diffuse ground-glass opacities and pulmonary emphysema, by which starts therapeutic anticoagulation. By 24/8 CPAP was suspended after 9 days with a maximum pressure of 12 mmH2O. At 28/8 worsening due to nosocomial pneumonia with respiratory distress and neurologic dysfunction by which starts empiric meropnem and vancomycin and NIV in BiPAP mode with a maximum pressure of 18 mmH2O, changing later to CPAP with 13 mmH2O. Chest radiograph of 3/9 shows pneumomediastinum with subcutaneous cervical and thoracic emphysema. NIV suspension wasn't tolerated and patient end up dying at 7/9 for respiratory failure. Case 2. A 64 years old non-smoking woman presents at 7/8/2020 for fever, headache and dyspnea starting 7 days prior. At admission with polypnea, pO2 of 65 mmHg and pCO2 of 25 mmHg with 21% of FiO2. From the diagnostic work-up stood: lymphopenia of 1,000 × 10^9/L, RCP of 4.76 mg/dL, procalcitonin of 0.43 ng/mL, ferritin of 936 ng/mL; SARS-CoV2 positive PCR test; Chest radiograph with bilateral interstitial infiltrate also with consolidative hypodensity on lower left lung. By the 8th day of symptoms develops respiratory distress with worsening of RF with a 156 PaO2/FiO2 ratio by which is transferred to Pulmonology department to start CPAP with a maximum pressure of 14 mmH20 with clinical improvement. At 20/8 undergoes Chest-CT diagnosing an extensive pneumomediastinum with thoracic subcutaneous emphysema. NIV was switched to high-flow nasal cannula with progressive withdrawal and patient was discharged at 4/9 with clinical improvement.
Discussion: Pneumomediastinum is a known complication of COVID-19 as we presented two cases probably induced by NIV barotrauma. The low pressure applied in these cases may suggest that COVID-19 pneumonia may lower the threshold for barotrauma through alveolar lesion.

Keywords: *COVID-19. Pneumomediastinum. NIV.*

PE 019. OUTSIDE THE BREAST

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Case report: Female, 63 years old, former smoker. History of left breast cancer (stage IA) submitted to tumorectomy in January 2020 and partial radiotherapy having completed 5 cycles (last session in March), under tamoxifen. Presented to a tertiary hospital emergency department with a 2 week history of dry cough associated with fever, worsening asthenia and anorexia and weight loss of 10 kg in the previous 6 months. Vital signs on admission: TT 38 ºC, BP 95/42 mmHg, HR 68 bpm, SatO2 95%. Auscultation demonstrated decreased breath sounds in the left hemithorax and crackles. Complementary research highlighted an increase in inflammatory parameters. Chest X-ray showed hypotransparency in the lower half of the left pulmonary hemicampus. Chest CT scan showed condensation with an air bronchogram at the level of the upper and lower lobes of the left lung, associated with homolateral pleural effusion (PE). The patient was admitted assuming a community-acquired pneumonia. Empirical antibiotics and oxygen therapy were started. From the initial etiological evaluation to highlight a negative RT-PCR for SARS-CoV2, sterile blood cultures and negative antigenuria for Streptococcus pneumoniae and Legionella. During hospitalization she maintained persistent fever despite progressive antibiotic escalation, overlapping inflammatory parameters, with a negative etiological study. Reassessment chest CT showed extension of the previous condensations with new findings in the right lower lobe and mild bilateral PE. Flexible bronchoscopy revealed edema in the apex of the left lower lobe and scarce mucous secretions. Bronchoalveolar lavage was negative for bacteriological, mycological and mycobacteriological exams. On the 23rd day of hospitalization and antibiotic therapy, the patient progressed with worsening partial respiratory failure. Due to sustained polypnea and absence of gasimetric improvement with high-flow nasal cannula (PaO2/FiO2 ratio 115) and a chest CT suggestive of ARDS, the patient was transferred to the ICU with indication for invasive mechanical ventilation. Given the lack of clinical improvement, without isolation of an etiological agent, the diagnostic hypothesis of organizational pneumonia associated with radiation exposure with evolution into ARDS was raised. Methylprednisolone 1 mg/Kg/day was initiated while maintaining broad spectrum antibiotics previously initiated (meropenem and linezolid) with regression of fever within the following 24 hours and progressive clinical and radiological improvement. Ventilatory weaning was possible until low flow oxygen therapy was achieved and radiological reassessment revealed almost complete recovery of the pulmonary parenchyma permeability.
Discussion: Organizational pneumonia associated with radiation exposure is occasionally seen after breast radiotherapy and is characterized by infiltrates, sometimes migratory, that appear outside the irradiated area. The diagnostic criteria proposed in the literature include radiotherapy of the breast in the last 12 months, respiratory/general symptoms lasting more than 2 weeks, pulmonary infiltrates outside the irradiated zone and absence of a specific cause. Corticosteroid therapy has proven to be effective, but its use should be limited to severe symptoms due to interference in the treatment of baseline oncological disease, with recurrence being frequent. This case aims to highlight the importance for a high clinical suspicion in order to enable an early diagnosis and therapy and to reduce unnecessary antibiotic exposure and an increased mortality risk.

Keywords: *Organizing pneumonia. Radiotherapy. ARDS.*

PE 020. SWYER-JAMES-MACLEOD SYNDROME, A RARE DIAGNOSIS

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Introduction: Swyer-James-Macleod syndrome (SJM) is a rare lung disorder. It is characterized by unilateral hypertransparency of part or all of the lung. It is due to impaired vascular and parenchymal development of an area affected by childhood bronchiolitis obliterans, resulting in hypoplastic vascular regions and emphysematous lung areas. It is usually diagnosed in childhood, although some patients are diagnosed only in adulthood, incidentally on chest radiography (CR). The symptoms are scarce, namely: recurrent respiratory infection, dyspnoea, hemoptysis, chronic cough.
Case report: Male, 48 years, smoker. History of recurrent respiratory infections and asthma since childhood. Sent to the Pulmonology department for maintaining recurrent respiratory infections, chronic cough, short-term dyspnea and functional respiratory study compatible with severe obstructive ventilatory syndrome (SOV). On physical examination, she had: BMI: 20 kg/m^2, global decrease in breath sounds, wheezing on right lung auscultation. From the study: chest radiography (CR) revealed: hypertransparency of the right upper lobe. Plethysmography: Very severe SVO (FEV1 26%, FVC 68%). Echocardiogram: PSAP 35 mmHg, with no other major changes. Analysis: no major changes. Normal alpha 1 antitrypsin. Sputum microbiological without isolation of microorganisms. Chest CT scan: "In the lung parenchyma, panlobular emphysema is observed in the right upper lobe and multiple tubular and cystic bronchiectasis are seen. Total atelectasis of the middle lobe is observed, with cystic bronchiectasis inside (...) ". Angio chest CT scan: "hyperexpansion of the right upper lobe, with vascular rarefaction". Based on the clinical presentation and the radiological characteristics, the diagnosis of probable SMJ was established. Inhaled therapy instituted with budesonide + formoterol and tiotropium bromide; montelukast and azithromycin 500 mg 3 times/week. Advised and oriented to consult smoking cessation. Antipneumococcal prophylaxis was performed. The patient remains reluctant to comply with treatment and quit smoking. They maintain complaints of dyspnea for small efforts, despite having less recurrence of respiratory infections.
Discussion: This case shows a rare diagnosis in adults, which deserves to be considered in patients who present unilateral lung hypertransparency on chest X-ray. Treatment is generally conservative and includes: respiratory rehabilitation, bronchodilators and inhaled corticosteroids, treatment and prevention of respiratory infections.

Keywords: *Swyer-James-Macleod syndrome. Unilateral lung hypertransparency.*

PE 021. DYSPNEA IN COPD: NOT ALWAYS (JUST) CPOD

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Introduction: The diagnosis and management of comorbidities in patients with acute and/or chronic respiratory diseases play an essential role in symptom control, particularly in chronic obstructive pulmonary disease (COPD).
Case report: The authors present the case of a 60-year-old woman, former smoker (50 pack-years), with COPD GOLD 4D, chronic respiratory failure requiring long-term oxygen therapy (LTO), extensive centrilobular and paraseptal emphysema with bullae, referred to a lung transplant center for evaluation, major depressive disorder and diverticular disease of the colon. The patient was admitted to the Pulmonology Department with worsening dyspnea, orthopnea and cough with purulent sputum over the previous three months. On physical examination: emaciated and sarcopenic patient; tachypnea while resting, use of accessory muscles of ventilation, SpO2 96% with supplemental oxygen 2 L/min; pulmonary auscultation with decreased breath sounds bilaterally. Arterial blood gas (FiO2 0.24): pH 7.433; PaCO2 28.4 mmHg; PaO2 83.5 mmHg; SaO2 97%; HCO3- 21.3 mmol/L; Lactate 16.0 mg/dL. Laboratory tests: Hb 15.2 g/dL; Leucocytes 10,640/uL (neutrophils: 9,700/uL); Platelets 320,000; normal kidney function and electrolytes; CRP 2.73 mg/dL. Chest radiograph: bilateral hyperinflation of the lungs, flattening of the diaphragm, linear atelectasis of the middle lobe. Assuming infectious exacerbation of COPD, the patient was treated with levofloxacin 750 mg/day (7 days), bronchodilators, systemic corticosteroids and oxygen therapy, with initial clinical and laboratory improvement. All microbiological tests were negative. Despite optimization of all medical treatment, the patient presented with worsening resting dyspnea. Non-invasive ventilation (NIV) was started in order to relieve dyspnea in the setting of severe COPD and impaired muscle strength. CT pulmonary angiogram excluded pulmonary embolism. On the 15th day of admission, the patient presented with partial bowel obstruction and a nasogastric tube was inserted, with the immediate drainage of 1,250 mL of bile stained gastric content. CT scanning of abdomen and pelvis: dilatation of the ascending and transverse colon (maximal diameter: 11 cm), dilation of the small bowel, with distal collapse near the splenic flexure of the colon and localized bowel wall thickening. The patient was evaluated by General Surgery and, given the lack of response to conservative therapy and increased risk of bowel perforation, she underwent urgent transversostomy for bowel decompression. No post-operative complications were reported and the patient was extubated after the procedure. Subsequently, there was clinical improvement in terms of abdominal and respiratory symptoms, with successful dyspnea relief. The patient was eupneic with supplemental oxygen 1L/min, with no need for NIV and she was discharged, clinically stable.
Discussion: The respiratory restriction caused by the abdominal distension secondary to partial bowel occlusion, associated with the severe bronchial obstruction and pulmonary hyperinflation, has compromised this patient's dyspnea control, despite optimized medical treatment. In the setting of symptomatic exacerbations of COPD, one should always consider potential extra-thoracic causes for uncontrollable dyspnea.

Keywords: *Dyspnea. COPD. Comorbidities.*

PE 022. BMI AND FEV1 IN PATIENTS WITH CYSTIC FIBROSIS. STILL RELEVANT MARKERS

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Introduction: Lung transplantation (LT) provides increased survival in patients with cystic fibrosis (CF). In pediatric age, CF is the most common indication for LT. Despite advances in medical therapy and improved survival, LT remains an important treatment option for children and teenagers with CF and advanced lung disease, especially in developed countries. Recent data from the European Cystic Fibrosis Society Patient Registry underline the importance of the Body Mass Index (BMI) and the Forced Expiratory Volume in 1 Second (FEV1) as indicators of mortality. This study aimed to describe the evolution and association between BMI and FEV1 in CF patients with advanced disease and indication for LT, followed in a pediatric reference center.
Case reports: Three female patients were identified, two aged 12 and one aged 16. Data on weight, height and FEV1 were obtained from reports of respiratory function tests carried out since the beginning of the children's follow-up at the hospital. The minimum

FEV1 values of 41.2%, 22.4% and 19.40% were found in the 3 children (respective z-scores of -4.77, -6.05 and -6.32) and minimum BMI of 12.74 Kg/m^2, 12.53 Kg/m^2 and 12.82 Kg/m^2 (respective z-score of -2.34, -3.29 and -2.41). In the 3 cases, there was a statistically significant association between FEV1 and BMI (p-value = 0.043; p-value < 0.001; p-value = 0.022). In two children, an inverse relation of these two parameters was obtained (r = -0.344; r = -0.398) while in the other case a direct relation was found (r = 0.215).
Discussion: Through these 3 cases of CF in pediatric age it is intended to demonstrate that there is a relevant relationship between nutritional status and lung function in advanced stage CF but of uncertain meaning. Other markers have become relevant in the prognosis of these patients, namely related with infectious, genetic, endocrine and socioeconomic factors. In any case, the optimization of nutritional status is one of the main priorities in the therapeutic approach to children and teenagers with CF proposed for transplant since it is associated with a better post-surgical outcome.

***Keywords**: Cystic fibrosis. Pediatrics. BMI. FEV1.*

PE 023. ASPERGILLOSIS IN A LUNG TRANSPLANT HOST WITH CYSTIC FIBROSIS

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Introduction: Fungal infections can be a serious complication of lung transplantation. Aspergillus fumigatus frequently colonizes the respiratory tract of patients with Cystic Fibrosis (CF), constituting a risk factor for the development of post-transplant pulmonary aspergillosis. Other risk factors are chronic immunosuppression, direct communication between the transplanted lung and the atmosphere and the abnormal anatomy and physiology of the transplanted lung - impaired ciliary function, impaired cough reflex, and denervation injury. However, most invasive fungal infections occur during the first 3 to 12 months.
Case report: We present the case of a patient with CF transplanted over 10 years ago who developed pneumonia to A. fumigatus. This is a female patient, 53 years old, diagnosed with CF at 30 years old, who underwent bilateral lung transplant at 40 years old. She has chronic colonization with Staphylococcus aureus. She presented to the emergency department with fever, nausea, vomiting and purulent sputum, which had already been treated with oseltamivir in the previous 5 days, without improvement. She had crackles in the lower half of the left hemithorax and pain on abdominal palpation. There was an increase in inflammatory parameters (CRP 10 mg/dL) and amylase (564 U/L). Chest radiography and abdominal CT showed no significant changes. It was assumed acute alitiasic pancreatitis, possibly secondary to oseltamivir, and the patient was hospitalized. On the 2nd day of hospitalization, due to ascending amylaemia associated with fever, with increased CRP (30 mg/dL) and procalcitonin (23 ng/mL), she underwent chest and abdomen CT, which revealed multiple areas of subpleural condensation, left basal inflammatory areas and central acinar micronodules in the middle and lower right lobes. To treat this pneumonia, she started piperacillin + tazobactam, without clinical improvement. A second chest CT revealed deterioration, with areas of condensation in the left lower lobe. She underwent bronchofibroscopy, which showed large amounts of mucopurulent secretions in the left bronchial tree. The cytochemical examination of the bronchoalveolar lavage showed a predominance of neutrophils (80%), and Staphylococcus aureus was isolated. Mycological culture was negative, but Glactomannan's index was positive. Meanwhile, it was isolated in the sputum Aspergillus fumigatus. In view of this result, she started isavuconazole, with rapid clinical, gasimetric and radiological improvement. Concomitantly, there was a decrease in amylase and lipase, and resolution of gastric complaints, allowing the patient to be discharged.
Discussion: In CF, because pulmonary exacerbations are usually bacterial, the diagnosis of fungal infections is often delayed. The clinical failure of antibiotic treatment during an acute bronchopulmonary exacerbation should prompt an active search for the responsible pathogen. Diagnosis by culture and visualization of fungi under the microscope is not always easy, as it can cause false negatives and is time-consuming, so methods such as the detection of Galactomannan in bronchoalveolar lavage are very useful. This case aims to illustrate the importance of maintaining a high level of suspicion of fungal infections, especially in susceptible patients, such as those who are immunocompromised, to initiate appropriate therapy as early as possible and, thus, improve the prognosis.

***Keywords**: Cytic fibrosis. Lung transplant. Aspergillosis.*

PE 024. PULMONARY EMBOLISM AND ITS NONSPECIFIC CLINICAL PICTURE - A CLINICAL CASE

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Introduction: Pulmonary embolism (PE) is one type of venous thromboembolism. Its diagnosis is often delayed due to a myriad of clinical presentation. There are recognized risk factors for its development and, when diagnosed, an etiological diagnostic march should be directed to a possible cause.
Case report: We report the case of a 22-year-old female patient, non-smoker, with a medical history of atopic dermatitis, allergic rhinitis and an episode of renal colic followed by a nephrology consultation and without etiology known. Her only medication was gestodene and ethinyl estradiol oral contraceptives. No relevant family history. Due to complaints of frequent nocturnal wheezing without correlation with worsening of rhinitis complaints and very easy tiredness for medium efforts, but without clear episodes of dyspnea, she underwent respiratory function tests (RFP) and was subsequently referred to the Pulmonology Consultation. These showed a reduced DLCO even when corrected for the alveolar volume, 61% and 68%, respectively. In RFP repetition, the same findings were maintained. Breath of oral predominance was identified. Was started on continuous medication with inhaled corticotherapy. In subsequent contact, she described improvement in wheezing, however, now she valued more complaints of tiredness for medium efforts with sporadic cough and asthenia. She had no other complaint, signs or symptoms. Thoracic CT angiography only showed a linear density of the posterior segment of the right upper lobe of residual character without other changes without vascular filling defects. From the autoimmune panel there was only a slight increase in anti-CCP and the immunoglobulin assay was normal. She also underwent CT of the peri-nasal sinuses that revealed thickening of the dispersed mucosa, probably due to a chronic inflammatory component. Ventilation-perfusion scintigraphy was requested, which showed slight irregularity in the contour in the perfusion study at the level of the upper segment of the left lower lobe, as well as a slight lower perfusion in the upper segment of the lingula. In this context, a thrombophilia study was carried out which did not reveal any changes, with irrelevant D-dimers. The RFP maintained an overlapping DLCO change. An echocardiogram was also performed: no changes with 20 mmHg PSAP. We opted for 3 months of anticoagulation with rivaroxaban and alteration to progestative, assuming PE. In the functional reassessment, there was an increase in DLCO (72% and corrected for a 79% alveolar volume). There was a clinical improvement, also reported by the patient, like a progressive increase in exercise tolerability, maintaining regular physical activity without limitations, a situation she previously described as unworkable.

Discussion: PE is one of the entities with the greatest variability in its clinical, analytical and imaging presentation. Often, high clinical suspicion can lead to the need for clinical introduction of anticoagulation without clear evidence of deficit in perfusion. Gas exchange is compromised, so DLCO can be considered a valuable clinical variable in its diagnosis.

Keywords: *Pulmonary embolism. DLCO. Anticoagulation.*

PE 025. ENDOBRONCHIAL MUCORMYCOSIS, A RARE PRESENTATION

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Introduction: Mucormycosis is a rare, opportunistic and life-threatening fungal infection that mostly affects immunocompromised patients such as diabetic and transplant patients. It is usually caused by fungi of the order Mucorales and Rhizopus and Mucor are the most common responsible microorganisms. It's a systemic pathology that manifests in the form of different clinical syndromes with rhino-cerebral, pulmonary, gastrointestinal, central nervous system, subcutaneous involvement and the disseminated form.
Case report: We present the case of a 50-year-old patient with type 2 diabetes with poor metabolic control (22% HbA1C) presented to the Emergency Department with disorientation, adynamia, drowsiness and fever with two days of evolution. Upon observation, the patient was polypneic (RR 23 cpm) and with depressed state of consciousness (GCS11). Arterial blood gas analysis revealed severe metabolic acidemia (pH 6.9 and HCO3 3.1 mmol/L). Blood analysis revealed leukocytosis (28,000 cells/uL) with neutrophilia (18,000 cells/uL), CRP 17mg/dL, blood glucose 664 mg/dL, ketonemia 4.2 mg/dL and creatinine of 1.44 mg/dL. Influenza B test turned out to be positive. Chest radiography demonstrated consolidation in the lower third of the left pulmonary field. The diagnosis of diabetic ketoacidosis was admitted in a patient with Influenza B and bacterial overinfection. The patient started insulin therapy with glycemic control and resolution of ketoacidosis. He completed therapy with oseltamivir, ceftriaxone and clarithromycin, however, the patient maintained the fever and elevated inflammatory parameters. Blood cultures turned out negative. Chest CT revealed consolidation with air bronchogram in the left lower lobe and mild left pleural effusion. In this context, a bronchofibroscopy was performed, which revealed white plaques adhering to the mucosa of the left main bronchus and left upper and lower lobar bronchi suggestive of fungal infection. Multiple endobronchial biopsies were performed and revealed multiple large septate hyphae with necrosis and angioinvasion suggestive of mucormycosis. The patient started anti-fungal therapy with isovuconazole (200 mg tid in the first 48h and then 200 mg once daily) with significant clinical and ragiological improvement. He was discharged with the indication to maintain antifungal therapy for 6 weeks and repeat chest CT after completing therapy.
Discussion: Mucormycosis, despite being a rare infection, should be considered in immunodeficient patients, especially diabetic patients. in this case, the findings of bronchofibroscopy and of bronchial biopsies were crucial to arrive at the diagnosis and initiate effective therapy.

Keywords: *Endobronchial mucormycosis. Fungal infection. Immunocompromised.*

PE 026. COMMON DISEASES, UNLIKELY CAUSES

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Introduction: Pneumonia caused by gram-negative aerobic bacteria, usually it's caused by colonization of the oropharynx and most often affects elderly, immunosuppressed, diabetic, alcoholic or chronic lung disease individuals but some strains can live in healthy people.
Case report: An 86-year-old non-smoker with no significant personal history was hospitalized due to fever, cough, mucopurulent sputum and an heterogeneous hypotransparency in the lower 1/3 of the left hemithorax. By the hypothesis of diagnosis of community acquired pneumonia, we started empiric antibiotic therapy with amoxicillin/clavulanic acid. Due to clinical worsening with episodes of hemoptoic sputum, without radiographic improvement and negative microbial tests (sputum bacteriological examination, blood cultures and antigens for Legionella and Pneumococcus), was performed a chest computed tomography (CT) scan, which showed a cavitation at the level of the left lower lobe. The antibiotic was scaled to piperacillin/tazobactam. HIV serology was negative. In this context, a bronchofibroscopy was performed for microbiological investigation and exclusion of bronchial/neoplastic obstructive pathology. The endoscopic findings were compatible with inflammatory signs in the left bronchial tree, having been isolated in the bacteriological examination of the bronchoalveolar lavage (BAL) Escherichia coli was sensitive to piperacillin/tazobactam. BAL cytological examination was negative for neoplastic cells and percutaneous transbronchial lung biopsy was also negative. Considering that the patient did not have any chronic disease, was not immunodepressed or wasn't taking any immunosuppressive medication, it was admitted, by exclusion, that the etiopathogenic mechanism was due to microaspiration phenomena related to the age of the patient. He was discharged asymptomatic and with evidence of radiographic improvement.
Discussion: We underline the importance of chest imaging, especially CT in the investigation of pulmonary infections with unspecified or ambiguous images, since it allows us to detect anomalies or underlying pathologies, and induce us to perform other techniques that help us to improve the approach therapy. Therefore, chest CT has a fundamental role in pulmonary infections, with the classic radiography alone being unspecific, especially in elderly or immunocompromised individuals.

Keywords: *Pneumonia. Escherichia coli. Cavitation.*

PE 027. WHEN IT RAINS, IT POURS

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Introduction: Primary or secondary lung abscesses are cavities filled with fluid or necrotic debris of microbial origin. Secondary abscesses represent approximately 20% of cases and are associated with an underlying condition, such as bronchial obstruction or hematogenous spread of a bacterial infection. We present a rare cause of lung abscess.
Case report: A 56-year-old man came to the Emergency Department with right-sided pleuritic chest pain and productive cough with mucopurulent sputum, one week after falling from his bicycle. The patient was a former drug user, HIV negative, undergoing opioid replacement therapy with methadone. He was a smoker with a 45 pack-year history. Laboratory findings revealed elevated inflammatory markers. The chest X-ray showed a heterogeneous hypodense area with cavitation in the right upper lobe anterior segment. A CT was performed that showed a subpleural, excavated and lobulated opacity, approximately 73 × 54 mm in maximum transverse diameter and extending longitudinally by up to 6 cm in the right upper lobe. The aspect of this lesion was suggestive of abscess, and there was communication between this lesion and an area where gas accumulated in the chest wall immediately adjacent, through an interruption of the third right costal margin, indicating the presence of a fracture. The gaseous area that encompassed both the chest

wall and the lung had a total longitudinal extension of approximately 10.4 cm. A bronchoscopy was performed with directed washing to RB1, resulting in the isolation of Streptococcus pneumoniae and Methicillin-resistant Staphylococcus aureus. We assumed a diagnosis of secondary lung abscess to chest trauma with costal margin fracture. The patient received antibiotic treatment with piperacillin-tazobactam. The patient's condition as well as laboratory test results substantially improved, and a chest CT performed five months after this episode showed regression of most abnormalities.
Conclusions: We highlight the significance of the fall in the patient's medical history and the severe abnormalities seen on the scans. The investigations led to the exclusion of other possible diagnoses such as pulmonary tuberculosis, actinomycosis or cavitating malignancy. In this case, the diagnosis of lung abscess was made possible by the patient's excellent response to antibiotics and the course of his disease, both at the clinical and imaging level.

Keywords: *Lung abscesses. Rib fracture. Non-tuberculous infections.*

PE 028. POSITIVE CULTURE FOR ASPERGILLUS FUMIGATUS SPECIES COMPLEX: THE CONFUSION FACTOR IN A RESPIRATORY INFECTION INVESTIGATION – A CASE-REPORT

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Introduction: Pulmonary aspergillosis is a fungal infection to the species Aspergillus, ubiquitous in the environment, which is caused by the inhalation of spores. The most common form is chronic cavitary pulmonary aspergillosis, which is estimated to affect three million people globally, most frequently and more frequently in people with underlying pulmonary disease such as tuberculosis, chronic pulmonary obstructive disease (COPD) or sarcoidosis. In the absence of treatment, it may progress to extensive lung fibrosis leading to a major loss in lung function.
Case report: 81 year old woman, with known history of COPD and smoking (35 pack-year), who presents to the emergency room (ER) with headache, chills, high blood pressure and aggravated cough, in the last day. Blood work showed elevated inflammatory parameters (WBC 20,900; CRP 6.2 mg/dL) and partial respiratory failure and hyperlactacidaemia in arterial blood gas; the chest radiograph showed heterogeneous opacities in both lung bases, which prompted the diagnosis of community acquired pneumonia with partial respiratory failure and hyperlactacidaemia, and she was committed into an internal medicine infirmary and put under empiric antibiotic therapy and supplemental oxygen. During her internment, because of difficulties in removing supplemental oxygen therapy and an aggravated chest radiograph, a thoracic CT-scan was performed that revealed sequelae from old lung disease predominantly in the right upper lobe, and a coexisting heterogeneous consolidation area with air bronchogram which was discussed with the pneumologist and prompted a bronchofibroscopy with collection of bronchoalveolar lavage, which was sent for cytologic and cultural exams. In her 11th day at the hospital, the patient's clinical state started to improve, allowing for progressive release from supplemental oxygen therapy until complete suspension. She was sent home after seventeen days, totally asymptomatic, still awaiting results from the bronchoalveolar lavage culture. About five days after being released, the patient returned to the ER, for fever (TT.: 39.5 ºC) and a productive cough. In examination she was feverish, tachycardic, polypneic, with peripheral oxygen saturation of 90%, without supplemental oxygen. Her bloodwork showed new increase in inflammatory parameters (WBC 13,000; CRP 33.3 mg/dL) and her chest radiograph had worsened. At this point her bronchoalveolar lavage culture that was ongoing when she went home, showed a positive result for Aspergillus fumigatus species complex, which prompted the performance of Galactomannan blood test that was negative. After new clinical conference with the pneumologists to discuss the case, it was decided to start the patient on intravenous anti-fungal therapy with Voriconazole, along with antibiotic therapy with Piperacillin-Tazobactam. The patient improved, with resolution of fever and respiratory complaints, and was released from the hospital after five more days maintaining pharmacologic treatment at home, with oral ciprofloxacin and voriconazole, until her next medical appointment.
Discussion: Fungus infections, even in immunocompetent patients, are still a relevant diagnosis to consider while investigating respiratory infections. Previously existing lung disease makes for a difficult diagnosis and classification, as is demonstrated by this case.

Keywords: *Respiratory infection. Pulmonary aspergillosis. Aspergillus.*

PE 029. INVASIVE PULMONARY ASPERGILLOSIS: A CASE REPORT

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Introduction: The Aspergillus fungi can cause a wide variety of respiratory disorders (Allergic Bronchopulmonary Aspergillosis, Invasive Pulmonary Aspergillosis or Aspergilloma), with its capacity of infectiousness mainly dependent on the host's immune status and not on its intrinsic virulence. The most serious infection form, resulting from systemic spread and destruction of lung tissue, is named Invasive Pulmonary Aspergillosis (IPA), and it has a high mortality rate. Of all the known species, Aspergillus fumigatus is the one that most often becomes pathogenic for humans. The diagnosis of Aspergillus infection is based on clinical data, complemented by the identification of the agent in bronchial secretions and lung tissue.
Case report: 84-year-old man with a history of myelodysplastic syndrome (MDS), under supportive therapy, ischemic heart disease with elective coronary revascularization surgery four years prior, under dual antiplatelet therapy since then, prostate adenocarcinoma, with previous partial prostatectomy and hormone therapy in 2010, and arterial hypertension. Brought to the Emergency Department with hemoptysis during the previous week. He was hemodynamically stable, feverish and had hypoxemic respiratory failure. Analytically, there was pancytopenia and neutropenia (hemoglobin 6.8 g/dL; platelets 10×10^9/L; leukocytes 1.6×10^9/L with 600 neutrophils/μL), elevated C-reactive protein (84 mg/L) and negative procalcitonin. Imagiologically, there was evidence of bilateral parenchymal consolidations and alveolar hemorrhage. He was admitted to the Internal Medicine Service, with the diagnosis of multifactorial alveolar hemorrhage (respiratory infection, progressing MDS and dual antiplatelet therapy). He underwent septic screening (negative) and started therapy with infused aminocaproic acid, antitussive agent, and empirical antibiotic with piperacillin-tazobactam. There was a good clinical and analytical evolution up to the 5th day of hospitalization, at which point there was a fever upsurge and a rise in the inflammation analytical parameters. He underwent a new septic screening (negative) and antibiotic therapy was escalated to meropenem. On the 13th day, due to the maintenance of daily feverish peaks and the absence of analytical improvement, a new microbiological study was conducted, and empirical trimethoprim-sulfamethoxazole and fluconazole was started. After two days of processing the bacteriological examination of sputum, a filamentous fungus was isolated (Aspergillus fumigatus was later confirmed), so the therapeutic strategy was changed to voriconazole. Afterwards, there was a favorable evolution, with clinical, analytical and arterial blood gas improvement, and he was discharged on the 23rd day of hospitalization, oriented for weekly surveillance in the Outpatient Clinic, with the indication to maintain at least 6 weeks of antifungal therapy.
Discussion: IPA is the rarest form of Aspergillus infection, affecting mainly immunocompromised patients and usually having a poor

prognosis. In the case presented, after excluding other diagnostic hypotheses and failure of two broad-spectrum empirical antibiotics, in a patient with long-standing severe neutropenia and with compatible radiological findings, the hypothesis of fungal infection was admitted. This diagnosis was later confirmed by the cultural examination of the sputum where Aspergillus fumigatus was isolated. The identification of this type of infection implies a high degree of clinical suspicion; it should also be emphasized that treatment with antifungal therapy should be initiated as soon as IPA is suspected.

Keywords: *Aspergillosis. Aspergillus. Hemoptysis. Voriconazole. Immunosuppression. Neutropenia.*

PE 030. INVASIVE CANDIDIASIS WITH LUNG AND EYE IMPLICATION - A THERAPEUTIC CHALLENGE

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Introduction: Candidaemia and disseminated candidiasis' mortality rates remain high. Among its clinical presentations are fungal endophtalmitis and fungal pneumonia, which are rare forms of presentation among immunocompetent patients. Common risk factors are central venous catheters, gastrointestinal surgery and previous therapy with antibiotics.
Case report: 54 year-old female, that had underwent right hemicolectomy due to colon adenocarcinoma, with fecal peritonitis as a complication from the surgery. The patient was re-admitted at the hospital due to an enterocutaneous fistula twenty days after the surgery and initiated therapy with broad spectrum antibiotics. Four days after the re-admission, the patient developed fever, increase inflammatory markers with neutropenia. Blood cultures and central line microbiology exam revealed Candida Albicans and, therefore, fluconazole was initiated. As complications, ocular invasion of the vitreous body, with a decrease f visual acuity (1/10) and a fungal bilateral pneumonia, with isolation of Candida Albicans, were diagnosed. The patient also developed acute interstitial neffritis with acute renal failure after undergoing two CT scans with ionizing contrast for diagnosis purposes. Therapy with fluconazole was maintained for 30 days without clinical improvement, which led to a switch to voriconazole associated with intravitreous antifungal injections, and posteriorly victrectomy. Given the worsening of the renal function and hepatic cholestasis, voriconazol was suspended and therapy with liposomal amphotericin B was initiated, while awaiting for isavuconazol authorization to be granted. After initiating an isavuconazole regimen, the patient started to improve clinically, with hepatic function normalization, respiratory symptoms resolution, fistula closure and visual acuity recovery (9/10).
Discussion: The multidisciplinary on this clinical case highlights the complexity of invasive candidiasis. In this particular case, adding to complications related to diagnostic procedures and to the treatment itself, which led to usage of a third-line antifungal and ophthalmologic surgical intervention.

Keywords: *Invasive candidiasis. Candida albicans. Fungal pneumonia.*

PE 031. IATROGENIC EMPYEMA – A RARE COMPLICATION OF CT GUIDED LUNG BIOPSY

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Introduction: CT guided lung biopsy is a diagnostic procedure frequently used for diagnosis of lung cancer, with pneumothorax and lung haemorrhage as the most frequent complications.
Case report: 65 years old female, non-smoker, undergoing study in Pneumological Oncology for a right lung mass with small ipsilateral pleural effusion. For suspicion of lung cancer, the patient was electively interned for CT guided lung biopsy. Procedure was performed with a 18G needle and 4 tissue fragments were collected without immediate complications. The patient fulfilled the protocoled rest without any signs or symptoms and without evidence of acute complications on chest radiography. Ten days after procedure she is admitted on the emergency service for a 7-day clinical condition of dyspnoea, purulent sputum, right chest pai, anorexia and hypersuduresis. On clinical examination she was with fever and presented elevation of inflammatory markers. It was performed computed tomography of the chest that evidenced a right, large, multiloculated, pleural effusion with multiple air-liquid levels and characteristics of empyema. Diagnostic thoracocentesis was performed with drainage of a purulent, thick, foul smellling pleural fluid. Followed by thoracic drainage with jolly. Large spectrum, empiric antibiotics were started with piperacillin-tazobactam and vancomycin due to risk of nosocomial infection. Microbiology resulto of Streptococcus Intermedius in pleural liquid, agent frequently encountered in abscesses and empyema's. During the hospital stay the patient had a favourable evolution with improvement of respiratory symptoms and fever, progressive resolution of liquid drainage and gradual decrease of inflammatory markers. Anatomopathological examination of tissue samples were compatible with lung adenocarcinoma.
Discussion: Infectious complications, in particular empyema, after CT guided lung biopsy are rare, but can potentially delay systemic treatment of lung cancer.

Keywords: *Iatrogenic empyema. CT guided lung biopsy.*

PE 032. PNEUMONITIS AND GASTRITIS DUE TO CAUSTIC INGESTION: A REALITY IN THE COVID-19 PANDEMIC

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Introduction: The SARS-CoV-2 pandemic brought new challenges to the society, causing an increase in anxiety in the general population, as a result of the recommended prophylactic social isolation at home. The presence of COVID-19 introduced sudden and unexpected changes in lifestyle, for which the world population was not prepared.
Case report: Male patient, 74 years old, with depressive syndrome. In the context of prophylactic home isolation due to a pandemic, SARS-CoV-2, associated with sleep deprivation, the patient is taken to the hospital emergency department for an acute psychotic episode with suicide attempt by voluntary ingestion of caustic. He had GCS 15, hemodynamic stability, being eupneic in room air, without stridor or hypoxemia. Due to dysphonia was evaluated by Otorhinolaryngology, which identified hyperemia of the uvula, edema and hyperemia of the epiglottis as well as of the remaining laryngeal mucosa. To protect the airway, orotracheal intubation was performed and was admitted to the Intensive Respiratory Care Unit. Of the complementary diagnostic tests performed, amylaemia of 211 U/L stood out; Upper digestive endoscopy (UDE) suggestive of caustic gastritis with Zargar IIb classification, with a nasojejunal probe placed for post-pyloric feeding; performed cervico-thoraco-abdominal CT to exclude associated complications, with marked edema of the oro and hypopharynx structures with mucosal contrast uptake, areas of consolidation of the pulmonary parenchyma of the middle lobe and right lower lobe and ground glass, thickening and hypodensity of gastric wall (antro-pyloric region), with contrast uptake by the mucosa; Bronchofibroscopy and Laryngoscopy without appreciable macroscopic changes, the patient having been extubated with subsequent progressive reduction in supplemental oxygen

therapy. The diagnoses of chemical pneumonitis and gastritis by voluntary ingestion of caustic in the context of attempted suicide were admitted. Due to clinical improvement, the patient was transferred to the Pulmonology ward, where he maintained respiratory and motor rehabilitation. As a complication, we highlight the nosocomial tracheobronchial infection Serratia marcescens. The patient was discharged from the hospital without the need for supplemental oxygen supply, referred to the Pulmonology, Gastroenterology, Nutrition, Physical Medicine and Rehabilitation and Psychiatry Consultations.
Discussion: The present case aims to highlight the fact that the monitoring and treatment of patients with chronic pathologies may have been poorly safeguarded in the face of this pandemic time to SARS-CoV-2, with consequent exposure of individual weaknesses. The possible need for planning and institution of measures is emphasized in order to guarantee a close and regular follow-up of patients at risk. Thus, it will be possible to prevent similar situations, reducing the number of hospitalizations and the use of multiple resources.

Keywords: *Pneumonitis.*

PE 033. THE COMMON AND THE "VARIABLE"

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Introduction: Common variable immunodeficiency (CVI) is a primary immunodeficiency, usually diagnosed between 20 and 40 years old, with a prevalence of 1/25,000. It is caused by a failure to differentiate B cells, and therefore a decrease in the production of immunoglobulins. For this reason, recurrent respiratory infections are common. GLILD (Granulomatous-Lymphocytic Interstitial Lung disease) is a possible complication of CVI, present in about 10-20% of cases, being important to exclude it. When this disease is suspected, a differential diagnosis with sarcoidosis is required.
Case report: Male patient, 26 years old, 12 pack-year smoker, went to the emergency service with fever, weight loss and night sweating, with a few months of evolution. Hospitalized two months earlier for similar symptoms, having undergone empirical antibiotherapy. As a child he would have been hospitalized for pneumonia, and recurrent respiratory infections. In the objective examination, pulmonary auscultation with bilateral crackles and splenomegaly stood out. Analytically, slight leukocytosis and neutrophilia, and a CRP 5 mg/dL stood out. Chest X-ray with bilateral hilar engorgement. He underwent bronchofibroscopy whose microbiological result identified H. influenza, having completed 7 days of Ceftriaxone. Negative cytology and negative Acid-Fast Bacilli. He performed a thoracoabdominal CT scan that showed mediastinal, paratracheal in the aorto-pulmonary window, infracarinal and bronchopulmonary bilateral adenomegalies. Thickening of bronchial walls. Bilateral atelectasis, more relevant in the middle lobe. Hepatosplenomegaly. Multiple mesenteric adenomegalies, reaching a diameter of 20 mm. These changes were maintained on CT after antibiotic therapy. The hypothesis of sarcoidosis was raised. Analytically during hospitalization, an increase in B2 microglobulin, a slight increase in LDH, an IgG, subclass 2 and 4, IgA and IgM deficit were highlighted. He excised mediastinal adenopathies, in which "almost complete erasure of the ganglionar parenchyma by exuberant epithelioid granulomas" was observed, "with scarce foci of central necrosis, surrounded by the edge of small monotonous lymphocytes. Diagnosis: sarcoidosis." The medullogram showed B and NK cells with normal phenotype. T cells showed an inversion of the CD4/CD8 ratio, suggestive of a reactive process. The diagnosis of CVI was assumed, and immunoglobulin replacement therapy was started. Last CT performed with "small areas of fibrocicatrial nature in the posterior segment of the upper right lobe, middle lobe where there is the presence of bronchiectasis in the right lower lobe, upper left lobe and lingula. Mediastinal adenopathies the largest 14 mm. Subcarinal and hilar adenopathies are those with larger dimensions of 17.5 mm. Moderate splenomegaly 14.6 cm. Multiple mesenteric adenopathies with larger dimensions 25 mm. At this time, the patient continues to be followed in consultation with clinical stability.
Discussion: Common variable immunodeficiency is an underdiagnosed disease and is often mistaken for sarcoidosis. The two pathologies can coexist. GLILD is a complication of CVI, with a poor prognosis, whose early diagnosis is important, as well as the implementation of treatment. It is also important to continuously monitor patients with CVI, and to monitor possible inherent complications.

Keywords: *Common variable immunodeficiency. GLILD. Sarcoidosis. Differential diagnosis.*

PE 034. SYNOVIAL SARCOMA, A RARE DIAGNOSIS

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Introduction: Synovial sarcomas are rare malignancies with an incidence of 1-3 cases per 1,000,000 people that represent 8-10% of all soft tissue sarcomas. They are more common in males between 15-35 years of age. While approximately 90% of these malignancies occur before age 60, they may develop at any age. The most common genetic alteration is the t(X;18)(p11.2;q11.2) translocation, leading to the expression of a fusion protein which is responsible for the pathogenesis of synovial sarcomas. Synovial sarcomas are generally positive for certain markers, such as TLE-1, AE1/AE3, EMA, CK7, CK19, Vimentin, Bcl-2, CD99, and S-100, and negative for CD34, CD31, actin (HHF-35) or myoglobin. Small sarcomas and young people have better prognosis. The 5-year and 10-year survival rates are estimated at 60% and 50%, respectively. Treatment consists of tumor excision, chemotherapy and radiation therapy.
Case report: We present a case report of a 75-year-old female patient. She complained of a several year history of dyspnea on mild exertion, with no chest pain, cough, sputum or other complaints. Physical examination revealed no abnormalities. The chest X-ray showed a rounded area of decreased lucency with well-defined limits in the right juxtacardiac area, seen in the posteroanterior and right lateral views. Chest computed tomography (CT) revealed a large mass at the base of the right middle lobe with strong contrast uptake. The bronchoscopy and bronchial aspirate were sent for cytological and microbial analysis and showed no abnormalities. Targeted CT-guided biopsies were performed; tumor morphology and immunohistochemistry testing revealed it to be a synovial sarcoma. Staging tests showed no metastases. A monitoring strategy was adopted and no treatment was administered. The patient's general condition remained stable and there was no significant progression of disease.
Discussion: Synovial sarcomas may largely vary in morphology and immune phenotype, and are thus challenging to diagnose. The authors highlight some unusual features in this case report: age, gender, tumor site, and survival, despite the absence of specific treatment.

Keywords: *Synovial sarcoma. Rare neoplasm.*

PE 035. A RARE CASE OF CHORIOCARCINOMA

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Introduction: Choriocarcinoma is a trophoblastic tumour that mainly affects women of childbearing age, developing months or years after a molar or non-molar pregnancy. The non-gestational chorio-

carcinomas can arise from trophoblastic differentiation within endometrial carcinomas or from germ cells in the ovaries or germ cells that failed to complete their migration to the gonads.
Case report: M.M.L.N., female, 56 years old, smoker of 15 pack-years, with a history of chronic obstructive pulmonary disease, hypertension, dyslipidemia and an ischemic stroke 6 years ago. She had her last pregnancy at the age of 36 and was submitted to a hysterectomy for a uterine myoma when she was 37 years old. She presented to the emergency department with dyspnoea and fatigue, as well as pleuritic chest pain. Cardiac auscultation was normal, vesicular breath sounds were diminished in the upper third of the right lung field and her peripheral capillary oxygen saturation was 93%. Laboratory testing yielded a C-reactive protein value of 39.4 mg/L. Computed tomography (CT) scan revealed a mass of about 7 cm in long axis located in the posterior segment of the right upper lobe, with hypodensity in its interior that suggested necrosis, as well as a mild pleural effusion and thickening of both adrenal glands. The patient was referred for consultation and did a positron emission tomography (PET)-CT scan that revealed intense hypermetabolism (maximal SUV 51.0) in a large mass apparently located in the right upper lobe. The CT component of the study showed extensive homolateral pleural effusion. On the lateral aspect of the lower lobe of the contralateral lung there was a small hypermetabolic focus (maximal SUV 2.7) in an area of parenchymal densification. Areas of greater uptake were also identified in the body of D3 and D6, the left pedicle of D12 and the lower aspect of the left acetabulum/ischium. A CT-guided biopsy of the right upper lobe mass was performed and the anatomopathological examination revealed morphological and immunohistochemical features consistent with lung infiltration by a germ cell tumour with characteristics suggestive of choriocarcinoma, being impossible to determine whether it was primary or metastatic. We requested human chorionic gonadotropin (β-HGC) dosing, which was 15,66.8 mUI/mL, and cancer antigen 125 (CA-125), 358.0 U/mL. The case awaits discussion in a multidisciplinary meeting to decide on a therapeutic approach.
Discussion: Non-gestational choriocarcinomas are rare, but its majority occurs in the genital organs. This is an extremely rare case of non-gestational choriocarcinoma of pulmonary origin with bone metastasis.

Keywords: *Choriocarcinoma. Lung tumour.*

PE 036. ADIPOSE BRONCHUS

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Case report: A 71 year old male, retired (previously mechanical and driver). Ex-smoker (55 pack-year), with history of systemic arterial hypertension and stroke. He was evaluated in Pneumology by chronic bronchitis clinic and a GOLD 3B diagnosis was made. For a better disease characterization, a chest CT was performed, that showed light centrilobular emphysema and subpleural bullae; solid nodule in the left superior lobar lobe (LSLL), with subsegmental atelectasis/lingula hyperinflation signals. A bronchofibroscopy was performed, that evidenced partial occlusion of the LSLL by a pediculated nodular lesion, of regular and smooth aspect, mobile with the respiratory movements. Bronchial wash microbiology and cytology were negatives and the bronchial biopsies showed pavement metaplasia, without dysplasia. He was proposed for rigid bronchoscopy with biopsy repetition whose cytology evidenced large pavement-cellular metaplasia areas, without atypia. Considering the diagnosis hypothesis of eventual malign endobronchial lesion in a patient with risk factors and small functional reserve and after case discussion with Thoracic Surgery, a new bronchofibroscopy with biopsies was performed, which evidenced an increment of the adipose tissue, without atypia. Facing this result, a radiologic review was solicited with chest CT lesion density determination, that was identical to the adipose tissue density (-101/-71 UH). The hypotheses of simple hamartoma versus lipoma were assumed as the most likely. As both are benign lesions and lobar atelectasis or respiratory infections history were absent, a conservatory approach was adopted with vigilance maintenance.
Discussion: Pulmonary lipomas are uncommon, the most being endobronchial lesions and representing 0.15-0.5% of the lung tumors. The pulmonary hamartomas are most frequents, representing around 8% of the lung tumors, occurring, however, most frequently in lung periphery (> 90%). The endobronchial hamartomas represent only around 5% of that lesions. This lesions most be considered in the differential diagnosis of pulmonary nodules, as their suspicion can limit the performed invasive exams. Surgery can be considered in the symptomatic cases or with diagnosis doubt persistence.

Keywords: *Pulmonary nodule. Lipoma. Hamartoma.*

PE 037. WHEN THE CLINIC DOES NOT SUGGEST THE EXUBERANCE OF A DIAGNOSIS

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Introduction: Chest wall masses can be caused by a wide spectrum of clinical entities, with malignant tumours being a rare translation of these lesions. Ewing's sarcomas are responsible for 10-15% of all primary tumours of the chest wall and typically appear between 4 and 25 years of age. These may originate in bone structures or, less frequently, soft tissues and are typically characterized by large, rapidly growing and indolent masses, showing subclinical metastatic disease (especially in the lung) in 35-43% of cases. In general, the prognosis is poor, but it depends on several factors, including the extent of the injury at the time of diagnosis and the respective degree of invasion.
Case report: Male 23-year-old, non-smoker, with no significant personal or family history. Presents in the emergency department for progressive right chest pain, with 2 months of evolution, limiting physical efforts in the workplace (Performance status: ECOG 1) and requiring daily use of pain-relieving medication. No constitutional or respiratory symptoms were present. A chest radiograph was performed, which showed an extensive rounded opacity occupying the lower right pulmonary fields. Computed tomography (CT) clarified the presence of a bulky solid lesion 8.4 × 7.8 × 6.7 cm in major axes, with no clear separation from the lateral chest wall, encompassing and extending externally to the middle arch of the 5th rib; it presents areas of cystic necrosis/degeneration and discreet and heterogeneous uptake of intravenous iodinated contrast. A small simple pleural effusion was also present. Given the unspecificity of the imaging characteristics, the main diagnostic hypotheses were: sarcoma, neurogenic tumour, extra-nodal lymphoma. An ultrasound-guided transthoracic biopsy, with collection of various fragments of the lesion, was performed. The collected samples resulted in small, round and blue cell neoplasms with a high degree of malignancy. Immunohistochemical profile, along with clinical and imaging context, was highly suspicious of Ewing's Sarcoma. The final diagnosis was concluded by complementary genetic study. The aforementioned minimally invasive biopsy technique was decisive for diagnostic clarification. The patient was then referred for specialized consultation.
Discussion: In this case, the authors intend to shed light on a rare pathology, which should be included in differential diagnoses of chest masses, especially in young patients without evident metastatic disease. The radiological exuberance at presentation, displays the typical aggressive behaviour of these chest wall tumours

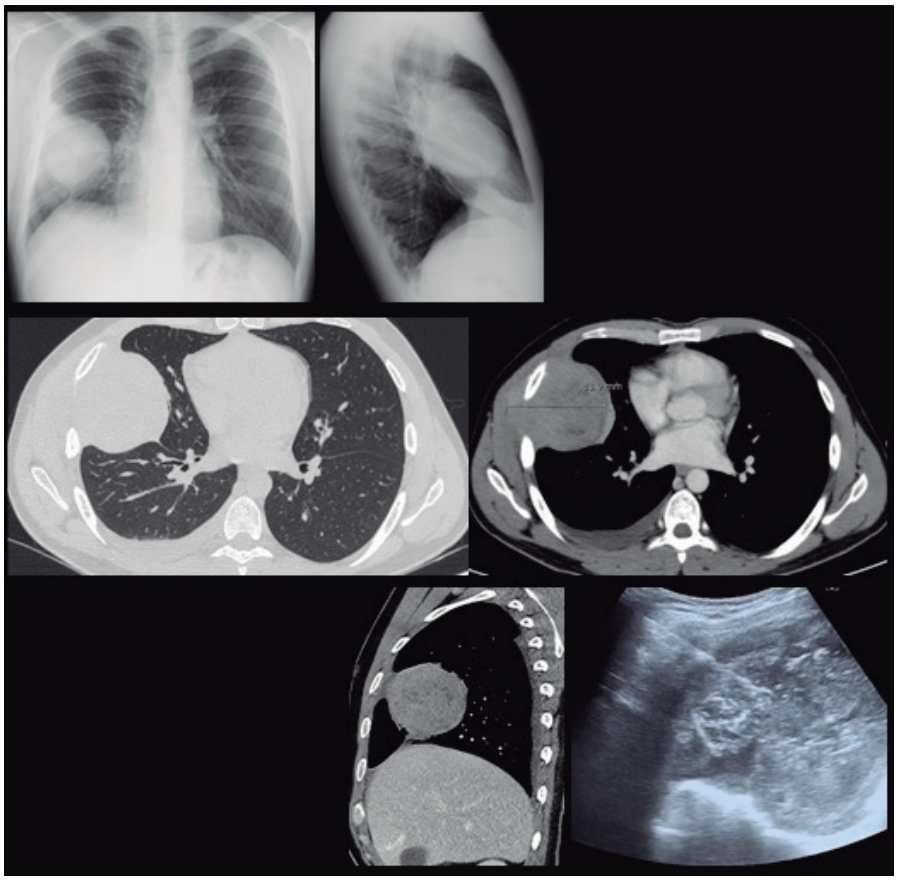

Figura PE 037

and should motivate the clinician to rapidly progress in his diagnostic study. Imaging techniques are generally unspecific, for this reason biopsies are fundamental and must be performed rigorously, in order to obtain an adequate quantity of tissue samples for extensive pathological analysis. These aspects, together with the essential multidisciplinary discussion, have a defining impact on patient prognosis.

***Keywords**: Primary tumours of the chest wall. Ewing's sarcoma.*

PE 038. CHRONIC PULMONARY THROMBOEMBOLISM: THE GREAT "MASKER"

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Introduction: Pulmonary thromboembolism occurs when there is an obstruction of the pulmonary artery (or one of its branches), caused by a thrombus that was formed in the venous system or in the right heart. The presentation is often nonspecific, can simulate several pathologies, thus making the diagnosis difficult.
Case report: 62-year-old, female, Caucasian, non-smoker. History of bronchial asthma, hypertension and pulmonary tuberculosis forty years ago. Multiple hospitalizations and antibiotic cycles in the last five years due to recurrent pneumonia. Referenced to Pulmonology appointment due to dyspnea progressive worsening (mMRC3) with about 1 year of evolution. Physical examination included (T 36.5 ºC, blood pressure 110/65 mmHg, heart rate 100 bpm, SPO2 96%, respiratory frequency 20 cpm), lung auscultation with globally reduced vesicular murmur and disperse wheezing. Chest CT scan described "loss of volume of the right lung with homolateral deviation of the mediastinum, hilum tugging due to atelectasis of the right upper lobe. Thickening of the segmental and subsegmental bronchi. Scar band from the hilum to the right apex". Bronchofibroscopy revealed partial occlusion on the right main bronchus by transverse band and distortion of the right bronchial tree. Bronchial secretions biopsies and cytology were performed, both negative for malignancy. For a complementary study of the alterations, functional respiratory tests were performed, which revealed obstructive alteration without improvement after bronchodilation (FEV1 68.7%); arterial blood gas analysis with hypocapnia (pCO2- 28.3 and pO2- 78.9); analytical study with autoimmunity and negative viral serologies; leukocytosis 12,000 (87% N), PCR 80, NTproBNP 300. The patient was medicated with fluticasone, tiotropium bromide and daily respiratory kinesiotherapy. Six months later, she returned to the Pulmonology appointment. During this period, she had an emergency episode with sudden dyspnea, productive cough and left hemithorax pain with pleuritic characteristics. Upon admission, vital signs were T 36.8 ºC, blood pressure 100/48 mmHg, heart rate 120 bpm, SPO2 92%, respiratory frequency 25cpm and lung auscultation with globally reduced vesicular murmur. Analytically, leukocytosis 18,300 (87% N), D-Dimers < 500 and C-RP 350. Chest X-ray showed a wedge-shaped opacity, triangular, with pleural base and apex facing the left hilum (Hampton sign suggestive). Normal ECG. Given the chronic pulmonary thromboembolism suspicion, a transthoracic echocardiogram was performed, which showed type I diastolic dysfunction pattern and 31 mmHg PASP, without functional impairment. The study continued with a pulmonary ventilation and perfusion scintigraphy and the results were compatible with pulmonary thromboembolism, with an impairment of about 28% of the pulmonary perfusion. The venous lower limb echo-Doppler and the abdominal ultrasound did not reveal any changes. The patient started anticoagulation and was afterwards diagnosed with triple positive anti-phospholipid syndrome (APS) (persistent positivity for lupus anticoagulant, anti-cardiolipin antibodies and anti-β2glicoprotein I).

Discussion: This clinical case's goal is to share the diagnostic challenge of a patient with chronic pulmonary thromboembolism. For several years the patient had repeated pulmonary embolisms, with clinical presentations that simulated severe pneumonia, followed by long periods of time in which the patient was asymptomatic. Thus, especially in recurrent "pneumonia", a high level of suspicion is essential to allow a correct and timely diagnosis.

Keywords: *Chronic pulmonary thromboembolism. Recurrent pneumonia.*

PE 039. CHRONIC COUGH: AN UNUSUAL CAUSE

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Introduction: Cough is a symptom that commonly leads people to seek medical help. It is important to approach it systematically given the wide range of differential diagnoses associated with it. Its classification based on the temporal duration makes it possible to narrow the diagnostic hypotheses to be considered. The recognition of a cervical mass should be followed by the identification of its exact location in order to differentiate between benign or malignant, congenital, inflammatory or neoplastic etiologies. Congenital neck masses are usually present at birth, but may present at any age. An example of this are Branchial Cysts, which are more frequent in pediatric age but, particularly if associated with infection, can manifest only in adulthood.
Case report: A 49-year-old woman, with no smoking habits, no past medical history or habitual medication, is referred to consultation for dry cough and a cervical mass of undetermined etiology with about 1 and a half months of evolution. She reported dry cough, with no temporal predominance, without triggering factors or other associated symptoms, namely hemoptysis, dyspnoea, hoarseness, dysphagia or constitutional symptoms. The patient denied environmental or occupational exposure to known triggers. She stated that she had a viral infection about a month before complaints begin. At physical examination, the patient had a palpable mass in the left anterior region of the cervical region, with about 3 cm of greater axis, regular contours, mobile, spongy in consistency, not painful on palpation and without associated inflammatory signs. Without palpable adenopathies, namely in the cervical, axillary or inguinal regions. Cardiac and pulmonary auscultation were normal and remaining physical examination without relevant changes. She had a cervical ultrasound that described an elongated hypoechogenic formation with irregular borders, homogeneous with tenuous internal vascularization, measuring 40 × 13 mm. From the complementary study carried out, the following stands out: blood workup, chest teleradiography, pulmonary function tests and esophagogastroduodenoscopy without abnormalities. Computed tomography of the neck showed "a heterogeneous area behind the left sternocleidomastoid muscle, about 39x15mm in diameter and which may correspond to na inflammatory collection". For further clarification, cervical Magnetic Resonance Imaging was performed, in which an "image compatible with inflammatory/infectious complications of the fourth branchial cyst" is described. The diagnosis of Branchial Cyst was therefore admitted as the probable cause for the patient's cough. Despite the medical therapy instituted, the symptomatology persisted, and the patient was referred to the Head and Neck Surgery Department.
Discussion: Chronic cough impacts patients' daily lives and can have important repercussions on their quality of life. When addressing this symptom, we must be aware of the warning signs that direct us to more serious etiologies that require urgent treatment. The authors intend to present the case of a patient with an uncommon pathology in the differential study of cough. This case highlights the importance of pursuing clinical investigation of the etiology of cough even after the most frequent causes are excluded, so that we can solve symptoms that are not life-threatening but with great impact on the lives of our patients.

Keywords: *Cough. Branchial cyst.*

PE 040. A RARE CASE: AN AGGRESSIVE DIFFERENTIAL DIAGNOSIS OF LUNG CANCER

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Introduction: The poorly differentiated thyroid carcinoma is a rare tumor, very aggressive, with a poor prognosis (5% survival rate of 0%).
Case report: 74-year-old woman, transferred from another hospital due to stridor in the context of tracheal mass, for multidisciplinary evaluation. After initial evaluation at the hospital of origin, a reduction in caliber of the trachea secondary to enlarged thyroid dimensions with tracheal invasion and tracheal polypoid lesion to be clarified was documented in a patient with information on hyperthyroid goiter; pulmonary nodule of 5 mm in the apico-posterior segment of the left upper lobe; mastectomy 2 years ago due to breast cancer, apparently without recurrence. During hospitalization, stridor worsened with the need for continuous positive airway pressure, after optimization of medical therapy, and episodes of mild hemoptysis. The patient was evaluated by Otorhinolaryngology, with no indication for tracheostomy due to the unfavorable location of the tracheal lesion, which technically made the procedure unfeasible. Rigid bronchoscopy revealed an endobronchial mass of the anterior wall of the trachea 3 cm from the vocal cords. Laser photocoagulation and debulking of the mass, with placement of tracheal prosthesis was made. Histological analysis identified the presence of high-grade carcinoma, positive TTF1 and negative thyroglobulin, favoring a primitive pulmonary origin, probably a poorly differentiated adenocarcinoma. She underwent an upper gastrointestinal endoscopy, identifying an esophageal stricture with mild acute esophagitis; performed cervico-thoraco-abdominal-pelvic CT scan which revealed enlargement of the thyroid with nodular hypodensity with extra-thyroid insinuation, a large heterogeneous hypodense mass, from the lower side of the thyroid and without a cleavage plane with it, extending from the upper mediastinum down to the carina, reaching the right anterior chest wall, imprisoning the internal mammary artery, crossing the chest wall and reaching the left pleural space. This mass involves the trachea in almost its entire circumference, is associated with the incarceration of the supra-aortic trunks and thrombosis of the right internal jugular vein, bilateral pulmonary micronodules and bilateral pleural effusion. She performed an echo-guided aspiration cytology of the cervical-thoracic infiltrative solid mass, compatible with poorly differentiated thyroid carcinoma. After discussing the case in a multidisciplinary meeting with Endocrinology, a reserved prognosis due to neoplastic extension was admitted, in the absence of curative therapy. She started therapy with sorafenib 400 mg bid, with improvement of pain complaints and edema of the right upper limb, neck and face, with hospital discharge under long-term oxygen therapy for partial respiratory failure. One month after discharge, the patient died of disease progression.
Discussion: This case stands out for its rarity and clinical aggressiveness of the presented pathology. The poorly differentiated thyroid carcinoma is a rare diagnosis and, in this patient, imposed a differential diagnosis with lung cancer, given the location and immunohistochemical profile. It has a reduced survival, so its diagno-

sis must be early, in order to allow the establishment of immediate therapy and initiate follow-up in a multidisciplinary context, with the aim of reducing the morbidities resulting from the rapid and aggressive progression of the disease.

***Keywords**: Poorly differentiated thyroid carcinoma. Rigid bronchoscopy. Tracheal mass.*

PE 041. RHINITIS AND BAKER'S ASTHMA WITH FLOUR ANAPHYLAXIS: A RARE OVERLAP OF OCCUPATIONAL CLINICAL ENTITIES

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Introduction: Occupational exposure to flour can trigger allergic clinical manifestations. Rhinitis and baker's asthma are frequent occupational allergic diseases, caused mainly by the inhalation of cereal flour and with a known cause-effect relationship. Although the association of baker's asthma with food allergy to wheat is uncommon, allergens such as alpha-amylase inhibitors, LTPs (lipid transfer proteins) and gliadins seem to be involved in the overlap of those clinical entities, due to their capability of sensitization through an inhalational route.
Case report: We report the case of a 40-year-old woman with generalized seronegative myasthenia gravis, without previous history of other medical or surgical diseases, who worked for more than two decades as a cashier in a bakery/pastry shop. About 19 years after the beginning of her professional activity, the patient began to feel watery rhinorrhea, pruritus and bilateral nasal obstruction, sometimes accompanied by an erythematous and itchy rash, after contact with flours in the work environment. About 1 year later, the patient had two episodes of anaphylaxis after eating wheat bread, treated in the emergency department with intravenous steroids and antihistamines. The patient was referred to Immunoallergology Outpatient Consultation for further study. Skin tests for common inhalants were negative; skin tests for flour were positive for oats (6.5mm), rye (9 mm) and wheat (9 mm). Wheat, rye, oats and gluten-specific immunoglobulins E (IgE) were positive; egg and milk proteins-specific IgE were negative. The molecular allergens rTri at 14 (LTP) and rTri at 19 (omega-5 gliadin) were negative. Spirometry with bronchodilation test was normal. Nonspecific inhalation challenge with methacholine was partially positive. Oral provocation test for wheat was not performed due to the previous history of anaphylaxis. ImmunoCAP™ ISAC is underway with the aim of identifying molecular allergen(s) involved in this case. Baker's rhinitis and asthma and severe food allergy to flour were the established diagnoses. The following measures were instituted: use of personal protective equipment in the workplace, avoidance of the implied cereals, nasal washes, nasal topical corticosteroids, oral antihistamine, ICS/LABA inhaled therapy and SOS epinephrine self-injection pen. A Mandatory Professional Disease Participation was submitted to the Department of Protection against Professional Risks; 100% incapacity to work in bakery/pastry has been attributed. Change of job position and avoidance of cereals involved in inhalation, contact and ingestion were done. Since then, the patient has no need for medication and remains clinically stable, without further episodes of anaphylaxis.
Discussion: Inhalational sensitization can lead to the development of rhinitis, occupational asthma and food allergy to wheat, as in this case, so it is important to look for shared allergens and propose withdrawal from the job position as early as possible, because it can be a curative measure. Identifying the causative allergen(s) has potential implications for the better diagnosis and treatment of these patients. However, there are still many doubts about the pathogenesis underlying these cases, which always benefit from a multidisciplinary assessment.

***Keywords**: Occupational asthma. Baker's asthma. Occupational rhinitis. Flour food allergy. Anaphylaxis. Molecular allergens.*

PE 042. AN ATYPICAL PRESENTATION OF A RARE INTERSTITIAL DISEASE

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Introduction: Airway-centered Interstitial Fibrosis (ACIF) is a rare and relatively recent entity. Characterized by dry cough and progressive dyspnoea; shows a bronchilocentric histological pattern of lesion with consequent centrilobular fibrosis and chronic inflammatory infiltrate that extends to the adjacent interstitium. It seems to start in the upper lobes and with posterior extension to the lower lobes. Some etiological possibilities have been proposed, such as Hypersensitivity Pneumonitis, chronic aspiration of gastric content, collagen vascular diseases, or a combination of these factors.
Case report: 74-year-old man, former smoker for 25, 70 UMA; carpenter for 38 years and currently a farmer, sulfating but using PPE. His personal history is OSAS, hypertension and dyslipidemia. He was followed up in consultation for surveillance of a single 8mm pulmonary nodule with ground glass pattern, located in the posterior segment of the SLL. At follow-up, an increase to 20 mm in the dimensions of the nodule was verified. He performed PETscan that showed discrete FDG uptake. He was asymptomatic and PFRs were normal, including DLCO. Extemporaneous biopsy with prior harpoon marking was proposed, which verified the absence of neoplastic lesions and the definitive anatomical-pathological diagnosis of ACIF. After this result, he performed an autoimmunity study and a search for precipitins for birds and fungi, which were negative. Due to the absence of signs and symptoms, and with normal PFR, the beginning of treatment was postponed. Three months after surgery, the patient developed a clinical worsening, with cough, tiredness, efforts dyspnea-mMRC 2 and the appearance of crackling fervors in the right thorax; and imaging, with extensive dense irregular area in the SLL with calcifications and pleural tugging - fibrocicatricial area most likely. However, a dense area of about 20 × 9 mm in diameter and vaguely nodular in appearance is observed at this level. No other changes in the lung parenchyma. PFRs remained normal. It was decided to start systemic corticosteroid therapy with clinical improvement. Chest CT maintains the changes described. Currently no oral corticosteroid therapy, keeping inhaled budesonide.
Discussion: Ground glass nodules are a subtype of non-uniform pulmonary nodules of a lesser density than solid nodules. Its approach aims to identify which of these lesions are or will be neoplasms. Over time, malignant ground-glass lesions grow or develop a solid component inside, or both. Serial chest CT is able to identify these changes and allows diagnosis in the early stages. The neoplasm that most often presents itself as ground-glass opacity is in situ adenocarcinoma. They are typically lesions of indolent growth with less risk of invasion when compared to solid lesions. In this clinical case, the patient underwent serial chest CT with the aim of evaluating the evolution of a ground glass nodule. The increase in its dimensions raised the suspicion of a malignant lesion for what was proposed for PET and surgical resection. The histological diagnosis of ACIF was a surprise in this clinical context, which is why this case is described due to the atypical presentation of a rare interstitial pathology, ACIF.

***Keywords**: Acif. Ground glass nodules. Interstitial disease.*

PE 043. BIRT-HOGG-DUBÉ SYNDROME: A CASE REPORT

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Introduction: Birt-Hogg-Dubé syndrome is characterized by kidney tumors, skin lesions and pulmonary cysts, often associated with pneumothoraxes. It is a rare genetic syndrome (1/200,000) of autosomal dominant transmission.
Case report: A 79-year-old woman non-smoker with a history of pneumothorax for about 30 years. In April 2017, she was referred to the Pulmonology Outpatient Department due to pulmonary cysts. She then underwent a high-resolution chest computed tomography (CT) which revealed numerous thick-walled bilateral parenchymal cystic images, some more confluent, the three largest being, respectively, apical on the right measuring 5.40 × 3.90 cm, in the inferior segment of lingula to measure 4.8 × 2.40 cm and in the posterior costo-phrenic sinus to the right measuring 5.40 × 3.20 cm. There was a predominance of these lesions in the middle and lower thirds of both lungs. Renal parenchymal changes were also observed. Abdominal-pelvic CT showed some simple cortical renal cysts bilaterally, the largest on the right in the lower third, with 18 mm, and on the left with 10 mm. Therefore, it was admitted Birt-Hogg-Dubé syndrome as a diagnosis hypostasis and requested FLCN genetic testing, that confirmed the diagnosis. The patient maintains annual surveillance in a Pulmonology Outpatient Department.
Discussion: The authors present this case due to its rarity and the fact that the diagnosis was described taking into account the pulmonary lesions, conversely to most of the cases, in which the diagnosis is conducted by cutaneous lesion.

***Keywords**: Birt-Hogg-Dubé syndrome. Pneumothorax.*

PE 044. AIRWAY-CENTERED INTERSTITIAL FIBROSIS: A CASE REPORT

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Introduction: Airway-centered interstitial fibrosis (ACIF) was initially described in 2002 by Yousem et al as "idiopathic bronchiolocentric interstitial pneumonia". It is characterized by airway fibrosis and chronic interstitial lung disease. Due to the involvement of small and large airways, the most consensual name was ACIF. However, knowledge about this disease is scarce because there are still few reported cases.
Case report: A 50-year-old woman, smoker (30 units pack year) with no relevant medical history. The patient was referred to pulmonology outpatient departmen to in May 2015 for suspected pulmonary tuberculosis. She presented shortness of breath for small efforts and night sweats. Computed tomography (CT) of the chest revealed a bilateral and diffuse multi-micronodular pattern, with septal and paraseptal thickening, as well as cylindrical bronchiectasis. The lesions described were more pronounced in the upper two thirds of both lungs. Respiratory function tests were normal. Bronchofibroscopy was performed with bronchoalveolar washes, which was normal. The microbiological study of the aspirate and the washed was negative. Then, she performed surgical pulmonary biopsy of the right and middle upper lobe, whose histology showed interstitial fibrosis centered on the airways. She started systemic corticosteroid therapy and remained on surveillance, staying stable under progressively lower doses.
Discussion: The authors present the case for its rarity and to highlight the need for further investigation of ACIF to better prevent and treat these patients. It should be noted the importance of histology in this clinical case, since the clinical manifestations and imaging presentation is not specific.

***Keywords**: Pulmonary interstitial disease and pulmonary fibrosis.*

PE 045. A RARE CAUSE OF PNEUMONIA WITH RESPIRATORY FAILURE

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Introduction: Acute Eosinophilic Pneumonia (AEP) is a rare disease characterized by fever, non-productive cough and dyspnoea that can progress rapidly to severe respiratory failure or even ARDS. The diagnosis implies a coexistence of acute respiratory failure (< 1 month), lung infiltrates on imaging studies and pulmonary eosinophilia (> 25%). Its origin may be idiopathic or secondary to exposure to various agents. Treatment with corticosteroids is usually very effective with rapid clinical improvement and without recurrence.
Case report: A 55-year-old shoemaker is brought to the Emergency Department complaining of severe dyspnoea, non-productive cough and headache, these symptoms began after exposure to glue and waterproof spray in a closed environment and progressed over the course of 6 hours. On admission he was polypneic, presented type 1 respiratory failure and a radiologic pattern of diffuse opacities with bilateral interstitial distribution. The blood tests showed a mild leucocyte count elevation with neutrophilia, no peripheral eosinophilia. Patient was admitted to the Pulmonology ward for treatment and further investigation, a Thoracic HRCT revealed several ground glass opacities and septal thickening. A Flexible Bronchoscopy was performed and showed diffuse inflammatory signs and a predominance of eosinophils (37%) in the bronchoalveolar lavage. Admitting the diagnosis of PEA secondary to the inhalation of the waterproofing agent and/or glue prednisolone was initiated (50mg/day) with rapid resolution of respiratory failure and improvement of imaging changes. Patient was discharged with indication for progressive weaning from corticosteroid therapy in the subsequent 4 weeks and avoidance of exposure to the presumed responsible agents. Observed in outpatient consult about 1 month after discharge, he remained asymptomatic even after finishing corticosteroid therapy, with no respiratory failure and with normal chest radiography.
Discussion: We present this case alerting to the existence of this rare entity in which the delay in treatment can be potentially fatal, but on the other hand, when started in time, it has an excellent prognosis. Only with full knowledge of its existence and with a careful clinical evaluation it is possible to include this disease in our list of differential diagnostics.

***Keywords**: Respiratory failure. Acute eosinophilic pneumonia. Corticosteroids.*

PE 046. THIS IS NOT YOUR USUAL INTERSTITIAL PNEUMONIA

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Case report: The authors present the case of a 56-year-old Caucasian male patient, former smoker of 40 pack-years, who worked as an automobile painter and in a battery factory, and was exposed to pigeons. He had a previous history of hemorrhagic stroke due to left frontal-parietal arteriovenous malformation rupture, and underwent three embolization procedures with no sequelae. The patient was referred to Pulmonology to investigate hypoxemia detected during a previous hospitalization in Neurosurgery. Before the first

embolization, the chest radiograph already showed bilateral reticular opacities. He presented with complaints of dyspnea and fatigue on minimal efforts, gradually worsening in the year prior (mMRC grade 3), as well as productive cough with mucous sputum, xerostomia, digital clubbing and Raynaud's phenomenon. No wheezing, chest pain, respiratory infections, joint pain, skin changes or ocular complaints were present. Physical examination was significant for facial plethora, peripheral cyanosis, digital clubbing of the hands and feet, and bilateral crackles on pulmonary auscultation. Arterial blood gas (FiO2 21%) revealed type 1 respiratory failure, with moderate hypoxemia (pO2 52.9 mmHg). Laboratory tests showed positive antinuclear antibodies (ANA), with a 1:160 titer and nucleolar pattern, and positive anti-Ro52 (SS-A) antibodies. Chest TC revealed a fibrotic non-specific interstitial pneumonia (NSIP) pattern: diffuse sub-pleural thickening of intra and interlobular septa (more pronounced in the lower lobes), slight sub-pleural honeycombing in the upper lobes, ground glass opacities in lung bases and traction bronchiectasis and peri-bronchial cysts in the lower lobes. Lung function tests showed severe restrictive pattern (TLC 49%), with severely decreased diffusion capacity (DLCO 23%). The distance walked on the six minute walk test (6MWT) was lower than predicted (258 m). Bronchoalveolar lavage (BAL) differential cell count showed 12% lymphocytes. Lastly, a salivary gland biopsy was performed, which was normal. The case was brought to an Interstitial Lung Disease (ILD) Multidisciplinary Meeting and a working diagnosis of interstitial pneumonia with autoimmune features (IPAF) was assumed. Surgical lung biopsy was contraindicated due to poor lung function. He was started on a prednisolone regimen with slow weaning and showed significant clinical, functional and radiographic improvement on follow-up (mMRC grade 2; 6MWT distance of 422 m; chest CT with fewer areas of densification).

Discussion: IPAF designates idiopathic interstitial pneumonia in patients with autoimmune features who do not meet definitive criteria for diagnosis of any known connective tissue disease. In this case, the absence of marked lymphocytosis in BAL fluid made hypersensitivity pneumonitis unlikely, despite the positive history of exposure. Moreover, suspicion of Sjogren's syndrome was not confirmed by salivary gland biopsy. This patient met criteria for IPAF, namely suggestive features from all required domains: clinical - xerostomia and Raynaud's phenomenon; serologic - positive ANA in nucleolar pattern and positive anti-Ro52 antibody; and morphologic - NSIP pattern in chest CT. In challenging cases such as this, the ILD Multidisciplinary Meeting is a fundamental tool. There are no established guidelines for the treatment of IPAF as of yet, but some authors recommend a therapeutic approach similar to that of connective tissue disease-associated interstitial lung disease (CT-ILD).

Keywords: *Non-specific interstitial pneumonia. Interstitial pneumonia with autoimmune features. Connective tissue disease.*

PE 047. AN UNCOMMON CAUSE OF NON-SPECIFIC INTERSTITIAL PNEUMONIA

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Case report: The authors present the case of a 67-year-old male patient, former smoker of 70 pack-years, with a previous history of exposure to mold and canaries. He also had a myocardial infarction six years prior, treated with primary coronary intervention and stent placement, with subsequent development of heart failure and placement of an implantable cardioverter-defibrillator. He was since medicated with acetylsalicylic acid, carvedilol, lisinopril, furosemide, pantoprazole and rosuvastatin. The patient was referred to Pulmonology to investigate interstitial changes detected in chest CT during hospitalization for pneumonia. He presented only with slight dyspnea on strenuous exercise (mMRC grade 0-1), and was otherwise asymptomatic. Physical examination was significant for crackles on both lung bases on pulmonary auscultation. No hypoxemia was present. Chest CT showed thickening of intra and interlobular septa, diffuse areas of ground glass opacity especially in the lower lobes, and some traction bronchiectasis. Laboratory testing was normal. Lung function tests showed a moderate restrictive pattern (TLC 65%) and a moderately decreased diffusion capacity (DLCO 50%). The six minute walking test showed a diminished walking distance (387 m, 59% of the predicted value). Flexible bronchoscopy revealed no relevant changes. The case was brought to an Interstitial Lung Disease Multidisciplinary Meeting, and a working diagnosis of non-specific interstitial pneumonia (NSIP) of unclear cause was assumed. Pharmacological etiology was suspected; thus, the patient stopped rosuvastatin and was started on ezetimibe instead. No targeted therapy was initiated due to lack of symptoms. Improvement on chest CT was evident after six months, with reduction of septal thickening and ground glass parenchymal densification. However, one year later, after having being started on atorvastatin by the attending cardiologist, clinical worsening was notorious: complaints of dyspnea became more severe (mMRC grade 3) and the patient developed hypoxemia. Functional decline was also evident, namely in the diffusion capacity (DLCO 28% in re-evaluation tests). Chest CT also showed worsening of the previously described findings. Therefore, atorvastatin was assumed as the likely causative agent, and statin therapy was once again withdrawn.

Discussion: NSIP describes a chronic interstitial pneumonia characterized by relatively homogenous involvement of the pulmonary interstitium by an inflammatory process. It manifests itself on chest CT by subpleural reticulation, ground glass opacities and, in advanced cases with fibrotic progression, traction bronchiectasis. NSIP can be idiopathic, but in many cases a known cause is present, such as HIV infection, connective tissue diseases, hypersensitivity pneumonitis or drug-induced pneumonitis. Some of the agents more frequently associated with drug-induced pneumonitis include amiodarone, methotrexate, nitrofurantoin, chemotherapeutic agents and statins. Statins' role in reducing cardiovascular risk make them one of the most frequently used drug classes; however, they have been found to cause drug-induced pneumonitis, a potentially serious adverse effect which is not widely recognized.

Keywords: *Non-specific interstitial pneumonia. Drug-induced pneumonitis. Statins.*

PE 048. SARCOIDOSIS AND PSICOSIS – IS IT DISEASE'S OR TREATMENT'S FAULT?

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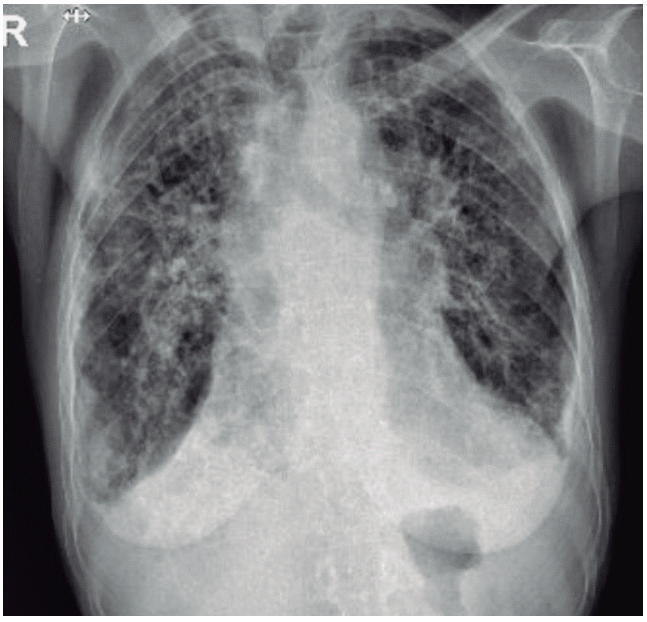
Introduction: Sarcoidosis is a multissistemic granulomatous disease, of unknown aetiology with an highly heterogeneous clinical presentation, with neurosarcoidosis as an uncommon but clinically significant manifestation. Neurological involvement is recognized in 3 to 10% of the individuals with sarcoidosis, with complex and variable symptoms and imagiological characteristics. Costicosteroids are a first line option of pharmacological treatment in the management of sarcoidosis. Besides their known immunosuppressive activity, they often cause various side effects, such as psychiatric symptoms ranging from mild mood fluctuations to full-blown psychotic episodes. Although these symptoms usually resolve after discontinuation or reduction of the steroid dose, there are some situations where pharmacotherapy with mood stabilizers and antipsychotic drugs might be indicated.

Case report: 66-year old woman, previously independent in performing activities of daily living, retired, with history of sarcoidosis stage IV (followed in Interstitial Lung Diseases consultation), cylin-

drical and cystic bronchiectasis, pulmonary hypertension and monoclonal gammopathy of undetermined significance, without known psychiatric history. Under oral corticotherapy since February, 2018 (regressive titration to a maintenance dose of 10 mg/day of prednisolone since January, 2019) and long term oxygen therapy. In March, 2020, the patient was presented to the hospital by her relatives with time and space disorientation, confusion and feeding aversion, with a week of evolution. Blood studies showed leukocytosis with neutrophilia and raised inflammatory markers; without worsening of the chronic respiratory insufficiency and radiological changes on chest radiography overlaid on the known architectural distortion and reticular pattern. The patient was admitted for endovenous antibiotherapy. Albeit a favorable analytical evolution, the patient maintained behavioral changes. A head tomography was performed without any acute or chronic anomalies. After discussion with the Neurology department, further workup was performed: a head magnetic resonance ruled out any anomalies compatible with neurosarcoidosis and an electroencephalography showed intermittent generalized slow anomalies, supporting the diagnosis of iatrogenic encephalopathy secondary to corticosteroids. The patient was discharged with corticosteroid dose's reduction to deflazacort 7.5 mg/day and, after psychiatric evaluation, risperidone and olanzapine (after two weeks of treatment, risperidone was reduced to minimal dosage and olanzapine was discontinued, after marked improvement of the encephalopathic symptoms).



Discussion: Development of new symptoms in a patient with sarcoidosis usually leads to the suspicion of organic envelopment by the disease. However, it should be noted the importance of considering a concurrent disease, an infection or, as in the presented clinical case, a drug toxicity. Corticosteroid therapy frequently causes side effects of the neuropsychiatric spectre, constituting a confusion factor and hindering correct and timely diagnosis.

Keywords: *Sarcoidosis. Psicosis. Corticosteroid therapy.*

PE 049. MICRONODULAR PATTERN - A COMPLEX DIAGNOSIS

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Case report: The authors present the case of a 56-year-old male patient, non-smoker. Previous diagnoses of Hepatitis B under entecavir, anti-Jo1 polymyositis with muscle and lung involvement under systemic corticosteroid therapy and mycophenolate mofetil. He went to the Emergency Department for a 2-week course characterized by pleuritic chest pain, productive cough with mucous expectoration, progressive worsening dyspnea, tiredness for small efforts and fever for 4 days. He presented a slight increase in the analytical parameters of infection and underwent a chest CT scan that revealed exuberant mediastinal adenopathies in the hiluses, countless micronodular formations, of centrilobular predominance and craniocaudal progression, with nodular clusters on the left base. In the gasimetric evaluation, he had partial respiratory failure, requiring oxygen therapy. He was admitted to the Pulmonology Service for diagnostic investigation. From the remaining complementary diagnostic study, highlighting nasopharyngeal exudates for SARS-CoV2 negative, negative blood cultures, direct BAAR sputum exam negative, analytically ECA 103 and Sedimentation speed 62. Performed bronchofibroscopy with bronchoalveolar lavage with cytology with a predominance of macrophages (79%), CD4/CD8 ratio of 4, pneumocystis screening, bacteriology, mycobacteriology, mycological testing and screening for negative viruses. Pathological anatomy was negative for neoplastic cells. EBUS was performed with an aspiration puncture from station 7 without neoplastic cells. Subsequently, the patient underwent atypical pulmonary resection of the right lower lobe and right upper lobe, stationary ganglionar biopsy of season 4 by videothoracoscopy. The pathological anatomy of the surgical specimen revealed a parenchyma with multiple scattered non-necrotizing granulomas suggestive of sarcoidosis. The patient showed clinical improvement and was discharged without the need for oxygen therapy. Awaiting proposal to start infliximab therapy.
Discussion: This case highlights the complexity of the pathologies in immunocompromised patients and the possible overlap of diagnoses that should alert us and consider the need for therapeutic escalation.

Keywords: *Sarcoidosis. Micronodular. Polymyositis.*

PE 050. EOSINOPHILIC GRANULOMATOSIS WITH POLYANGIITIS - A CASE REPORT

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Case report: A 48-year-old non-smoker woman presented with 2 months of worsening of the usual pattern of dyspnea, coughing and wheezing. At the same time, she developed self-limited episodes of diarrhea, paraesthesias and erythematous lesions in the lower limbs. She had history of sinusitis and uncontrolled asthma requiring multiple cycles of systemic corticosteroid therapy in the past 5 years. On physical examination, she had bilateral wheezing on pulmonary auscultation and erythematous papules on the lower limbs. Laboratory findings showed eosinophilia, normal IgE and all auto-immune workup was negative, including the antineutrophil cytoplasmic antibody (ANCA), as well as the entire hematological complementary study. In HRCT, bronchiectasis and scattered micronodular pattern were observed and CT of the sinuses showed mucous hypertrophy of the turbinates, septum and nasal walls, translating hypertrophic rhinitis with polypoid degeneration in the upper part of the nasal cavities and musculoskeletal units. Functionally she presented severe obstructive ventilation change (FEV1 37%) with pulmonary insufflation and moderately decreased DLCO. She underwent bronchofibrosocopy whose bronchoalveolar lavage revealed 18% eosinophils. Invasive microbiological study was negative for bacteria, mycobacteria and fungi.

Discussion: The erythematous lesions of the lower limbs were biopsied, and their histological result revealed to be infiltrates of eosinophilic vasculitis corresponding to the skin involvement by eosinophilic granulomatosis with polyangiitis (EGPA). She started therapy with corticotherapy and later with benralizumab, showing marked clinical and radiological improvement. EGPA, previously called Churg-Strauss syndrome, is a small and medium vessel vasculitis, included in the category of vasculitis associated with antineutrophil cytoplasm antibodies (ANCAs). Clinically it is characterized by three distinct phases: a prodromal phase, characterized by asthma and allergic rhinitis, followed by an eosinophilic phase, marked by eosinophilic infiltration of tissues and target organ dysfunction, ending in a vasculitic phase, in which palpable purple lesions appear, which is where most patients are diagnosed. This case is presented not only because of its rarity, but also because of the importance in bringing together all the clinical, analytical, radiological and histological elements for the correct diagnosis and treatment.

Keywords: *Asthma. Sinusitis. Eosinophilia. Vasculitis.*

PE 051. TOO YOUNG FOR IDIOPATHIC PULMONARY FIBROSIS? MAYBE NOT

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Introduction: Idiopathic pulmonary fibrosis (IPF) is a lung limited disease characterized by progressive, fibrosing interstitial pneumonia of unknown cause. It manifests as progressive worsening dyspnea and lung function. It occurs primarily in older patients (≥ 60 years-old) and middle age adults are rarely affected.
Case report: Male patient, 45 years-old, natural from Guiné-Bissau and living in Portugal for 21 years. Non-smoker. He had previous medical history of arterial hypertension, lymphoid thymic hyperplasia, aortic valve endocarditis with valve replacement at the age of 43 years-old, and interstitial lung disease (ILD) diagnosed at the age of 36 years-old, without pulmonology follow-up. Chest Computed Tomography (CT) at diagnosis showed discrete reticular opacities with small bronchiectasis and bronchiolectasis, and small pneumatoceles at right upper lobe. He had been submitted to surgical lung biopsy at the time of diagnosis revealing interstitial fibrosis with numerous fibroblast foci and collagen deposition with few areas of normal parenchyma; rare inflammatory infiltrate; areas of alveolar bronchioliolization and pneumocyte type 2 hyperplasia. It was suggestive of usual interstitial pneumonia pattern with areas "non-specific interstitial pneumonia like". No history of familiar lung disease was known. He was referred to ILD appointment due to ILD diagnosis lost on follow-up. At first appointment, the patient complained of exertional dyspnea (mMRC2-3) and dry cough. The patient was eupneic at rest, no connective tissue disease (CTD) features were present and lung auscultation revealed bilateral crackles. He was under medication with prednisolone 20 mg once a day and long-term oxygen therapy. Chest-CT reevaluation showed reticular opacities in the immediate subpleural lung, mainly at the lower lobes; traction bronchiectasis; and moderate centrilobular and paraseptal emphysema of the upper lobes. Lung function evaluation revealed severe restrictive lung defect (FVC of 1.34L, 31.4%; FEV1 of 1.23L, 35.3%, FEV1/FVC of 92 and TLC of 4L, 61%) with severe impairment of diffusing capacity of carbon monoxide (28.9%). Arterial blood gases were normal at rest. In six-minute walking test with oxygen he walked 478 meters (predicted value of 510 to 663 meters) without stops or desaturation events and with Borg dyspnea scale of 4 at the end. Blood tests showed normal alpha-1 antitrypsin levels and autoimmunity panel screen was negative. Genetic test was negative for pathogenic mutations of telomerase complex genes (TERT, TERC, RTEL1 and PARN) and pulmonary surfactant associated genes (SFTPA2, SFTPC and ABCA3). He was discussed over ILD multidisciplinary team and final diagnosis of IPF with emphysema was admitted. He started antifibrotic treatment with nintedanib 150mg twice a day, reduced prednisolone to 10 mg and was referred to lung transplant consultation. Unfortunately, the patient died before lung transplant was possible.
Discussion: IPF is characteristically a disease of old patients. Its diagnosis in young patients is usually associated with familiar IPF or underlying CTD. This clinical case shows a middle-age adult with diagnosis of IPF, without genetic association or CTD. Although very rare, this diagnosis must not be forgiven in young patients in order to avoid delay in treatment initiation.

Keywords: *Idiopathic pulmonary fibrosis. Middle-age.*

PE 052. POSITIVE AIRWAY PRESSURE THERAPY IN REM SLEEP BEHAVIOR DISORDER

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Introduction: Sleep disorders are common in Parkinson's disease (PD) and preceed the motor symptoms of the disease. One of the most common pre-motor signs is REM sleep behavior disorder (RSBD). Given the increasing prevalence with age of obstructive sleep apnea syndrome (OSAS) and neurodegenerative diseases, there is still controversy to whether PD may eventually increase the risk of OSAS.
Case report: Female patient with 66-year-old and a history of hypertension, diabetes mellitus, asthma and non-stratified cardiac pathology. She was referred to the Sleep Pathology appointment for frequent snoring, although without objective apneas. Despite sleeping between 8-9 hours per night, she had a notion of fragmented sleep with multiple night wakes but no complaints of daytime sleepiness. She also presented vivid dreams since the age of 45, practically daily, with memory for them, with "escape" content, sometimes accompanied by sudden movements of the limbs with accidental aggressions to the partner and falls during the night. Occasionally there were some somniloquy. She performed Video-PSG that demonstrated fragmented sleep with a micro-awakening index of 51.3/h (50.6% associated with PLMS; 31% with respiratory events with RDI of 19.2/h). Sudden movements of the limbs and discrete somniloquy in REM sleep were observed, namely during and after respiratory events; there was still a loss of atony in REM sleep, which is compatible with RSBD. Due to the presence of OSAS, she started ACPAP providing a resolution not only of respiratory events (residual AHI 0.6), of sleep fragmentation, but also of the sudden movements associated with RSBD. Afterwards, the patient was observed in a Sleep Neurology appointment, maintaining some vivid dreams, but with a notion of improvement of the motor manifestations in the context of RSBD with the introduction of ACPAP. She had pre-motor PD symptoms such as constipation, hyposmia and orthostatic hypotension. The neurological examination revealed an incipient extrapyramidal signs of stiffness, bradykinesia and left tremor in rest.
Discussion: This clinical case reveals the importance of a polysomnographic study in the differential diagnosis of OSAS, alerting to the existence of several mutually important sleep pathologies as a pre-motor symptom of PD. In this case, the symptoms associated with RSBD were aggravated in the context of moderate OSAS. The treatment of the respiratory disorder was sufficient to improve the symptoms of RSBD, thus avoiding the use of benzodiazepines frequently used in the pharmacological treatment of RSBD, which has respiratory depression as its main side effect.

Keywords: *OSAS. RBD. PLMS. Parkinson's disease.*

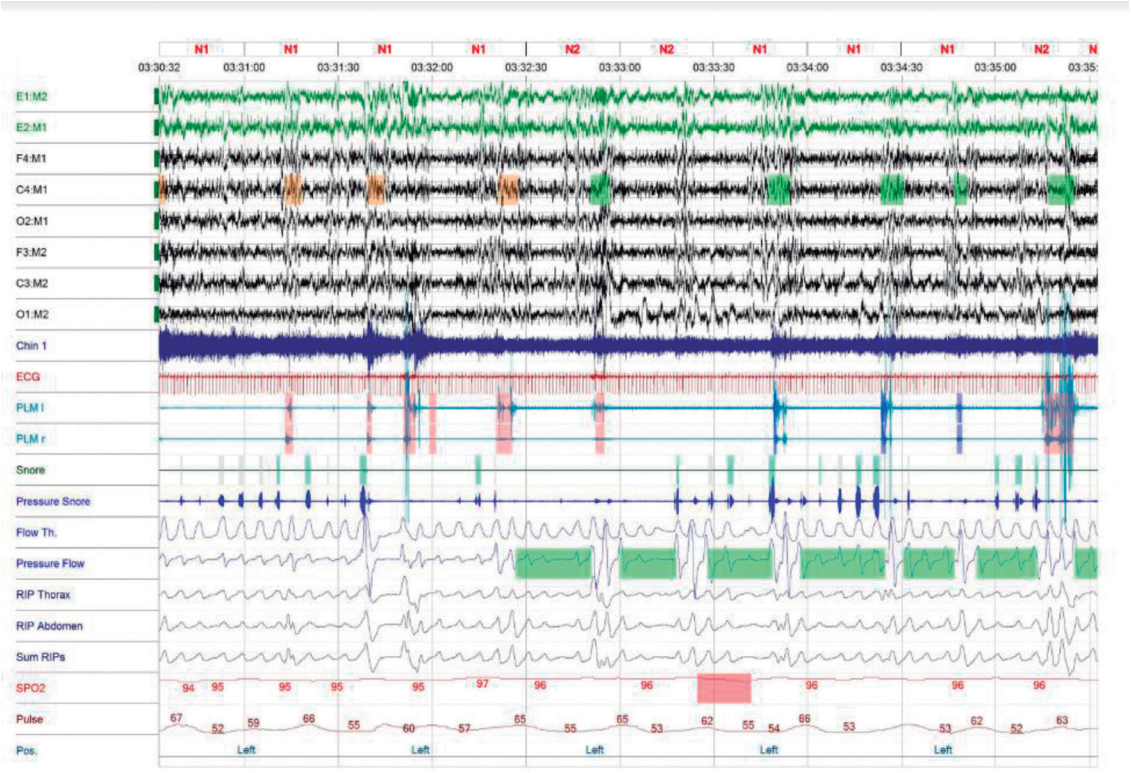

Figura PE 052A

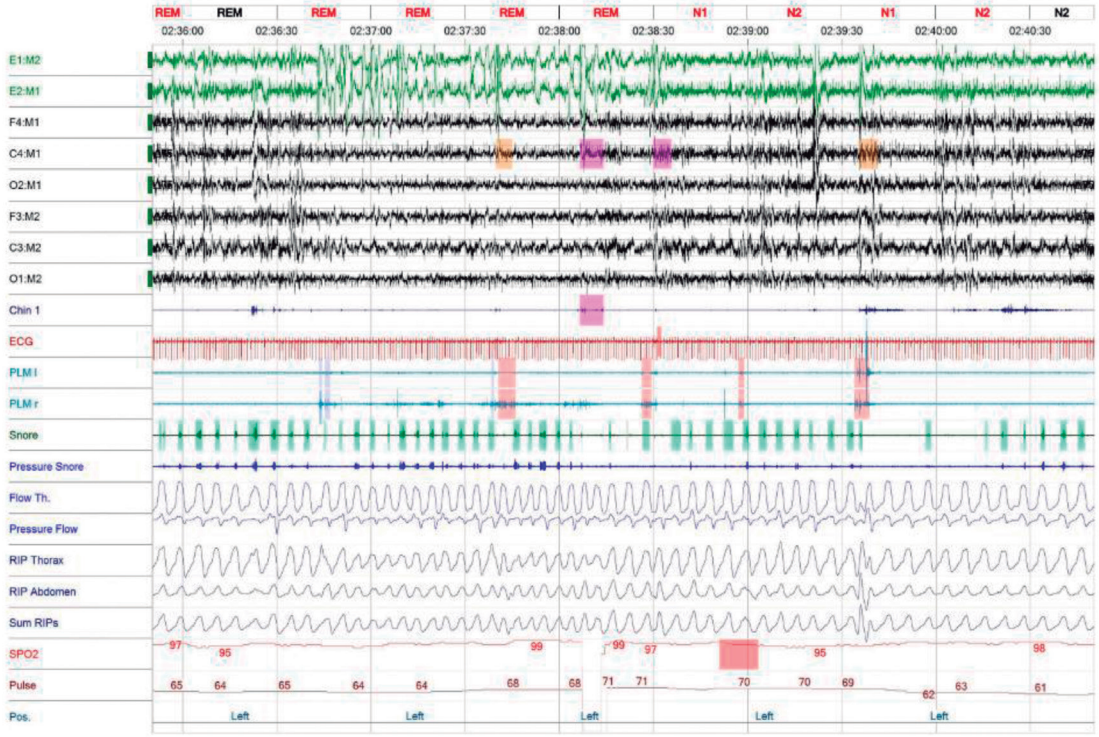

Figura PE 052B

PE 053. EPWORTH SLEEPINESS SCALE VARIATION AFTER VENTILOTHERAPY IN OBSTRUCTIVE SLEEP APNEA

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Introduction: Obstructive sleep apnea (OSA) is characterized by recurrent episodes of complete or partial upper airway obstruction during sleep. These episodes can result in a drop in arterial oxygen saturation and interfere with the normal sleep cycle, with consequent daytime hypersomnolence. Nighttime ventilation therapy is the treatment of choice.
Objectives: To quantify and correlate the variation in the Epworth Sleepiness Scale (ESS) with clinical and adherence parameters after the institution of ventilotherapy.
Methods: Retrospective study including patients with follow-up at a Sleep Pathology Consultation in a tertiary hospital. ESS was determined in the first and third consultations. Statistical analysis with paired samples t test, Student's t-test and Pearson correlation coefficient.
Results: Selected 472 patients, 83.7% men. The mean age (± SD) was 68.4 ± 10.7 years, the mean BMI was 33.0 ± 5.4 kg/m^2 and the mean apnea-hypopnea index (AHI) was 33.0 ± 22.9/h. The mean initial ESS was 11.8 ± 5.8. The average difference in days between the third and the first consultations was 517 ± 104 days and the difference from the final ESS to the initial was -8.1 ± 6.2. The average adherence to ventilatory therapy > 4h/day was 89.6 ± 15.2%, with 93.6% of patients under APAP/CPAP and 6.4% under BPAP. There was a significant difference between the final ESS and the initial ESS (3.4 ± 3.9 vs 11.8 ± 5.8, $p \leq 0.001$). This difference was linearly correlated with the decrease in age ($r = 0.117$, $p = 0.011$), the increase in BMI ($r = -0.130$, $p = 0.005$), the increase in AHI ($r = -0.227$, $p \leq 0.001$) and with a greater adherence to ventilation therapy ($r = -0.153$, $p = 0.001$). No significant difference was found between the final and initial ESS and gender (male: -8.3 ± 6.2 vs female: -7.2 ± 6.5, $p = 0.189$).
Conclusions: Patients with OSA on ventilation therapy showed a significant decrease in ESS in follow-up visits. This decrease was more pronounced in younger patients, with higher BMI and AHI and greater adherence to therapy.

***Keywords**: Epworth sleepiness scale. Obstructive sleep apnea.*

PE 054. GEOGRAPHICAL AND SEASONAL IMPACT ON THE INTERNET SEARCH FOR SLEEP RELATED BREATHING DISORDERS

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Introduction: Sleep related breathing disturbances (SRBD) are considered a risk factor for several medical diseases. We investigated the internet search for SRBD items worldwide and in geographic distinctive countries.
Methods: Keyword (KW) search was performed via google trends. The software reveals the relative occurrence of internet search. Data was restricted between 2010 and 2020. KW included: snoring, apnea, catching cold (CC), cold weather (CW), wine and weight. Search frequency was extracted worldwide (WW) and USA in English and in the local language for Portugal, Brazil, Germany, Sweden, Saudi Arabia, and Egypt. Exported results were analysed via SPSS.
Results: Snoring demonstrated a maximum search frequency during the winter (January 82.82 ± 13.7) and minimum in summer (June 56.27 ± 9.4). A one-way Anova analysis revealed a significant difference between the winter and summer in all included countries ($p < 0.001$) except in Sweden ($p > 0.05$). In the regression analysis we found that the prediction of WW snore searches was related to CC (B: 0.62; $p < 0.001$), wine (B: 5.09; $p < 0.001$), weight (B: 0.74; $p < 0.001$) and less clear cold weather (B: 0.12; $p = 0.09$). The overall model reached an adjusted R2 of 0.57 ($p < 0.001$). For Saudi Arabia and Egypt only, cold weather reached statistical significance ($p < 0.001$ and $p = 0.001$, respectively). The search frequency for apnea did not demonstrate any seasonal influence ($p < 0.05$).
Conclusions: We showed that the frequency of internet searches for snoring but not apnea demonstrated a significant seasonal pattern. Both maximum search frequency and explanatory factors are influenced by the geographical location. Further research to study these differences is warranted.

***Keywords**: Sleep apnea. Environmental influence. Internet.*

PE 055. COMPLIANCE TO CPAP IN OBSTRUCTIVE SLEEP APNEA SYNDROME - EFFECTS OF A TELEMONITORING PROGRAM

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Introduction: Continuous positive airway pressure is an effective treatment for obstructive sleep apnoea syndrome (OSAS). However, continuous positive airway pressure adherence rates are disappointingly low and effective interventions are needed to improve compliance. Telemonitoring have been used to help and support the patient during the CPAP adaptation, but the results have been inconsistent. This study aimed to determine outcomes of a telemonitoring program on compliance and efficacy of continuous positive airway pressure therapy comparing it to the usual clinical care.
Methods: From July 2019 to February 2020, we performed a randomised controlled trial with 49 patients newly diagnosed with obstructive sleep apnoea syndrome. This pilot study included 34 males (69.4%) and 15 females (30.6%), with a mean age of 58 ± 10.6 years and an average basal AHI of 26.8 ± events/hour. All patients were submitted to a comprehensive educational programme during CPAP adaptation and randomly divided into 2 groups- the telemonitorized group (25 patients) and the control group (24 patients). The first group was followed during the first month of therapy and contacted frequently. If any issue was detected, as lack of compliance, excessive air leak or incomplete correction of obstructive events, an intervention was made to correct it, by encouraging the patient, changing interface and/or changing pressure parameters. On the other side, the second group was only contacted or visited if they had autonomously asked for technical help. Both groups were re-evaluated on a face-to-face appointment 3 months later and the data were analysed.
Results: During the study, 9 patients (37.5%) on the control group lost the follow up comparing to 2 patients (8%) on the telemonitorized group, either because they missed the appointment (55.5%) or because the appointment was cancelled by the COVID- 19 pandemic (44.4%). The 2 patients in the telemonitorized group lost it because they didn't answer the phone calls. Those who remained followed were evaluated concerning compliance and efficacy of therapy during the first 3 months. There was a greater compliance to CPAP in patients in the telemonitored group (5 ± 2.9 hours/night), compared to patients in the control group (2.9 ± 2.8 hours/night); $p < 0.05$). Efficacy was similar in the 2 study groups (residual AHI of 2.3 ± 2.6 events/hour in the telemonitored group and 2.9 ± 3.2 events/hour in the control group). The number of interventions (interface changes, parameterization or humidifier placement) varied between 0 to 4 (average of 0.7) in the telemonitored group and between 0 to 1 (average of 0.3) ($p < 0.05$) in the control group.
Conclusions: This pilot study showed that telemonitoring significantly improved compliance to CPAP in patients with OSAS. In a

pandemic context, with the consequent reduction in face-to-face clinical activity, this approach can become very useful, allowing patients with OSAS to be controlled. However, studies with longer follow-up periods are needed to assess the long-term results of telemonitoring programs.

Keywords: *Obstructive sleep apnoea syndrome. Continuous positive airway pressure. Telemonitoring.*

PE 056. EVALUATION OF THE USEFULNESS OF THE SIT TEST FOR THE DIAGNOSIS OF RESTLESS LEGS SYNDROME

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Introduction: The coexistence of obstructive sleep apnea syndrome (OSAS) and restless legs syndrome (RLS) can make it difficult to approach each one. Getting to a correct diagnosis is therefore essential. If that of OSAS is relatively simple, given the semiological and polysomnographic criteria, that of RLS remains difficult and purely clinical, based on the criteria of the International Group for Restless Legs Syndrome (IRLSG). In an attempt to facilitate the diagnosis, the suggested immobilization test (SIT) has been used as a tool in suspected patients.
Objectives: Evaluate the usefulness of the SIT test for the diagnosis of RLS at our Sleep Medicine Center.
Methods: Retrospective analysis of the clinical records of all patients who performed the SIT test for suspected RLS, in the last 5 years (2015-2019). Demographic, clinical and polysomnographic data were evaluated. Statistical analysis was performed using IBM® SPSS® Statistics 25.
Results: A total of 79 patients, 32 (40.5%) men and 47 (59.5%) women, with a mean age of 55.6 (± 12.7) years, underwent the SIT test on suspicion of RLS. The most common complaint presented was non-specific urge to move the legs (35; 44.3%), followed by paresthesias (28; 35.4%). Forty-nine (49; 62%) patients reported insomnia, 33 (41.8%) had irregular sleep schedules and 56 (70.9%) reported a feeling of non-restorative sleep. The SIT test was positive in 22 (27.8%) individuals, negative in 52 (65.8%) and inconclusive in 5 (6.3%). In those with a positive test, the average movement of the lower limbs during the test was 55 (± 11.1). Based on the IRLSG criteria, 47 (59.5%) individuals were diagnosed with RLS. Of these, 21 (44.7%) had their SIT test positive, 23 (48.9%) negative and 3 (6.4%) inconclusive. There were significant differences in the proportion of patients with positive, negative and inconclusive tests ($p < 0.01$). The sensitivity of the SIT test for the diagnosis of RLS was 44.7% and the specificity was 90.6%. Despite the coexistence of SPI and OSAS in 34 (43%) patients, there was no statistically significant association between these pathologies ($p = 0.263$). In these patients, the most used treatment for OSAS was A-CPAP (16; 47.1%); regarding the treatment of RLS, most patients started dopaminergic treatment (19; 55.8%). In 5 patients, an expectant attitude was adopted: all improved SPI with the treatment of OSAS.
Conclusions: In our study, the SIT test showed high specificity, but reduced sensitivity for the diagnosis of RLS. About half of the patients with a clinical diagnosis of RLS had a negative SIT test. These results point to the existence of limitations in this exam. Its execution outside the most symptomatic period can compromise the results. Careful anamnesis, better semiological characterization and better definition of the most symptomatic hours can help increase the test's diagnostic yield. New studies focusing on the limitations of the SIT test, namely on inter and intra-individual symptomatic variation, may clarify which patients will benefit most from it.

Keywords: *Restless legs syndrome. Obstructive sleep apnea syndrome. SIT test.*

PE 057. RESTLESS LEGS SYNDROME AND ITS CONNECTION TO OBSTRUCTIVE SLEEP APNEA

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Introduction: Restless legs syndrome (RLS) and obstructive sleep apnea syndrome (OSAS) are two highly prevalent pathologies. OSAS can lead to a change in the most typical patterns of RLS symptoms due to sleep disruption and fragmentation. On the other hand, treatment with positive pressure can improve symptoms derived from RLS. Both have been related to an increase in cardiovascular risk. The study of these syndromes, and in particular the underdiagnosed RLS, becomes important for their impact on the patient's quality of life but also for the possible concomitant increase in cardiovascular risk.
Objectives: To characterize a population of patients with RLS and OSAS and to analyze the relationship between the two diseases.
Methods: Retrospective study of patients observed in consultation at a Sleep Medical Center in the last 8 years. Cases of patients with suspected RLS were reviewed, and the diagnosis was confirmed in the presence of the criteria defined by the International RLS Study Group (IRLSSG), sometimes supported by the need for pharmacological treatment and/or family history of RLS. Of these, patients with OSAS defined as RDI/AHI > 5 events/h were included.
Results: Of the patients analysed (n = 48), 45.8% were female with an average age of 57.3 ± 10.7 years old. Twenty-six patients (54.2%) were obese with an average BMI of 30.5 ± 5.1 kg/m^2 and 14 patients (29.2%) were smokers or ex-smokers. In this sample, the main RLS related symptom reported in each patient was "discomfort/need to move" (34.8%), "leg movements during sleep" (21.7%), "need to move the legs" (10.9%), "paresthesias" (10.9%) and "lower limb discomfort" (8.7%). Pain was identified in 2 patients, unilateral symptoms in 2 patients and movements of the upper limbs in 1 patient. The main complaints for referring these patients to a sleep center consultation were "snoring" (22.4%), "daytime hypersomnolence" (18.4%) and "snoring and apneas witnessed" (16.3%). In 3 patients the referral complaint was insomnia and in only 1 case the reason was due to RLS. The patients had an average RDI/AHI of 22.9 ± 17.8 events/h, the average PLMS was 17.8 ± 18.2 movementes, and the SIT test was performed in 9 patients with an average movement scored of 49,1. Pharmacological treatment was necessary in 29 patients (60.4%) and they were medicated with ropinirole (41.7%), clonazepam (12.5%) and gabapentin (6.2%). In 7 patients, treatment with positive pressure improved the symptoms of RLS and/or decreased the required dose of pharmacological treatment for symptom control. For this analysis, cardiovascular disease was admitted in patients with hypertension (58.3%) or history of infarction/revascularization (10.4%), history of heart failure (10.4%), arrhythmia (4.2%) or history of stroke/TIA (2.1%) making a total of 30 patients (62.5%).
Conclusions: Symptoms difficult to characterize make RLS recognition difficult, especially if associated with OSAS, whose symptoms often stand out. The high rates of cardiovascular disease associated with these two pathologies, make an early recognition and treatment of RLS even more important.

Keywords: *Restless legs syndrome. Obstructive sleep apnea syndrome.*

PE 058. CONTINUOUS AIRWAY PRESSURE TREATMENT IN OBSTRUCTIVE SLEEP APNEA: IMPACT IN MARITAL RELATIONSHIP QUALITY

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Introduction: Obstructive sleep apnea (OSA) is one of the most frequent chronic diseases. It durably impairs the quality of life of

patients and their relations. Continuous positive airway pressure (CPAP) is the first line treatment and its effectiveness is associated with global improvement of patients daily living. However, its impact in marital relationship remains to be assess.
Objectives: The purpose of the study is to assess the impact of CPAP treatment in patient's marital relationship quality.
Methods: Prospective study from a tertiary center with patients observed for the first time in sleep-related breathing disorders consultation, from May to August 2019, submitted to home cardiorespiratory polygraphy. Patients with a final diagnosis of OSA and CPAP treatment initiation were included. Data related to patients, marital relationship and CPAP treatment was collected. Patients reported their subjective views regarding their marital relationship using the Quality Marriage Index (QMI), Norton 1983, a 6-question questionnaire. The first questionnaire was fulfilled presential before treatment initiation and the second through telephone consultation after one year of CPAP treatment. QMI results were compared to evaluate the impact of treatment in patient's view over their marital relation.
Results: During study time, 72 patients were invited. Five were not included since they were not currently on a marital relationship and 7 refused to participate. Over the other 60, 10 had no OSA diagnosis and 24 had mild to moderate OSA without indication for CPAP treatment. From the 26 patients with OSA and CPAP initiation, 4 patients interrupted treatment during study time and 2 were lost from follow-up. In total, 19 patients were included: 13 (68.4%) male; with a mean age of 52.9 ± 10.5 years and mean body mass index of 33.4 ± 9.4 Kg/m^2. Sixteen (84.2%) patients had daily sleepiness [Epworth Sleepiness score (ESE) ≥ 11]. The baseline apnea-hypopnea index (AHI) was 28 [6.5; 94.4] events per hour. Couples lived together for a median duration of 27 [1; 41] years, 15 (78.9%) had at least one child and 18 (94.7%) shared the same bedroom. Before treatment median QMI score was 40 [11; 45]. At reassessment one year after CPAP initiation, 11 (57.9%) patients used CPAP > 4 hours per night in ≥ 75% of the time and 13 (68.4%) had resolution of day sleepiness. Median QMI score one year after treatment was 42.5 [28; 45]. There was a statistically significant improvement in patient's subjective view regarding their marital relationship quality under CPAP treatment compared to before treatment (QMI 40 vs. 43, p = 0.014).
Conclusions: CPAP treatment had already been proven to be effective in reducing symptoms and co-morbidities related to OSA, as well as, in improving patient's quality of life. This study suggests that CPAP treatment in OSA patients has also a positive impact in couple marital relationship.

Keywords: *Obstructive sleep apnea. Continuous positive airway pressure. Marital relationship.*

PE 059. EMPYEMA DUE TO PARVIMONAS MICRA

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Introduction: Parvimonas micra is a strictly anaerobic Gram-positive bacterium present in the oral microflora. This microorganism can be associated with polymicrobial infections such as sinusitis, periodontitis or even osteomyelitis and brain abscesses. Pleural infection by this microorganism is an extremely rare clinical condition, described only in few case reports.
Case report: The authors present the case of a 71-year-old male, former smoker, with OSA treated with AutoCPAP and with an implantable cardioverter defibrillator, who is admitted to the emergency department with dyspnea, chest pain and fever. The complementary study highlights an increase in inflammatory parameters and large volume right pleural effusion on chest radiography. Chest CT confirmed pleural effusion with signs of organization and showed partial atelectasis and condensation of the right lower lobe. Thoracic ultrasound and thoracentesis were performed. The pleural fluid was purulent, a 20G chest tube was placed and pleural fluid was sent for aerobic culture, which became negative. The patient was hospitalized and initiated empirical antibiotic treatment with ceftriaxone simultaneously with respiratory kinesiotherapy and daily pleural lavage. As the patient was not improving, a new microbiological study of the pleural fluid was carried out and antibiotherapy was empirically escalated to meropenem. Videobronchofibroscopy was performed and signs of extrinsic compression of the middle and lower right lobar bronchi were observed. Bronchial aspirate and bronchoalveolar lavage fluid cultures were negative. On the third day of broad-spectrum antibiotic, pleural fluid anaerobic culture was known to be positive to Parvimonas micra, however it was not possible to perform an antimicrobial sensitivity test. Given the favorable clinical, imagiological and analytical improvement with meropenem, this antibiotic was administrated for a total of 21 days. The patient was discharged with clindamycin for 15 more days. Due to the isolation of P. micra, the patient was observed in stomatology consultation where it was possible to see signs of periodontitis. Dental curettage and extraction of 2 teeth was performed. Control chest CT scan 3 weeks after discharge showed considerable improvement of the pleural effusion.
Discussion: The present case report emphasized the importance of the microbiological study in empyema. As it is a very unusual etiological microorganism of empyema, a high degree of clinical suspicion is required for infection by P. micra, and an evaluation of possible foci of infection such as the oral cavity is necessary. The authors report the present clinical case considering its rarity as an etiological microorganism of empyema.

Keywords: *Parvimonas micra. Empyema.*

PE 060. THE INSUFLATED PATIENT - A CLINICAL CASE

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Introduction: A pneumothorax is defined as the presence of air in the pleural space. COPD is one of the most common cause of secondary spontaneous pneumothorax (SPP) by rupture of lung bullae or blebs. A pneumomediastinum is the presence of air in the mediastinum. Subcutaneous emphysema is often associated with both situations. Thoracic drainage and posterior pleurodesis is the therapeutic course used in most SSP. On occasion, surgery is necessary for the resolution.
Case report: We report the case of a 75-year-old male patient, with a history of COPD with a 60 Pack-Year smoking load, OSAS and ischemic cardiopathy. He presents at the ER with intense dyspnoea associated with diffuse, pleuritic right thoracalgia, both in progression after an abrupt coughing fit, after chocking during lunch. At admission, a hypertensive right pneumothorax was identified on radiographic evaluation. A thoracic drain with active drainage was inserted in the fifth intercostal space (ICS) and the patient was admitted. Although he presented a favourable evolution initially, the recurrence of dyspnoea and the onset of subcutaneous emphysema on the superior portion of the thorax led to the placement of a second drainage on the second ICS, after radiologic confirmation of the pneumothorax's aggravation. The patient was transferred to the Pneumology unit due to the persistent clinical deterioration. At admission, the subcutaneous emphysema was evident, extending from the eyelids to the suprapubic regions. It was associated with voice distortion and hypoxemia. The active drainage was intensified, and the patient received high-concentration oxygen therapy. The tomography showed an extensive thoracoabdominal subcutaneous emphysema with concomitant pneumomediastinum, pneumopericardium, subpleural emphysema cystic bubbles and diminished expansibility of the pulmonary parenchyma, due to bilateral pneu-

mothorax. Due to the persistent subcutaneous emphysema, several subcutaneous needles were placed with temporary resolution. The serial radiographic evaluations demonstrated progressive pulmonary expansion, with an apparently complete resolution of the right pneumothorax. Nevertheless, the thoracic drainage was still bubbling, and the subcutaneous emphysema had returned to its initial presentation. A tomographic revaluation showed extensive subcutaneous and intermuscular emphysema in the thoracic, cervical and abdominal regions, diffuse pneumomediastinum, and a discreet right basal pneumothorax; the absence of a left pneumothorax; and a pulmonary parenchyma with predominantly paraseptal emphysematous changes, with important and well-defined cystic bullae. The case was discussed with Thoracic Surgery and the patient was proposed for a surgical approach. Intraoperatively, an exhuberant pneumomediastinum was identified, along with a punctured bulla of 4 cm. The patient was submitted to an atypical resection of the superior right lobe and videothoracoscopy-assisted pleurodesis. After the procedure, the patient presented a favourable clinical evolution with complete resolution of hypoxemia, and posterior resolution of the subcutaneous emphysema and pneumothorax in the subsequent imaging revaluations.
Discussion: The majority of SSP can be managed with the initial approach of thoracic drainage and posterior pleurodesis. When these measures are insufficient, surgical exploration is necessary for the definitive resolution of the situation.

Keywords: *Pneumothorax. Pneumomediastinum. Pleural drainage. Thoracic surgery.*

PE 061. A RARE CASE OF CATAMENIAL PNEUMOTHORAX

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Introduction: Catamenial pneumothorax was first described by Maurer and colleages in 1958. It is a rare secondary spontaneous pneumothorax probably underdiagnosed. Catamenial pneumothorax is a cause of recurrent pneumothorax in women of childbearing age (about one third of the cases), has a mean age of onset of 26-42 years. In most cases it occurs in perimenstrual period. Normally it´s unilateral, occurring in the right pulmonary side. The etiology of this entity remains unknown although there are different theories that try to explain it.
Case report: A 37-year-old woman, with no relevant past medical history and that never smoked. She presented to our hospital complaining of breathlessness and irritant cough. On that day she started a productive cough, fever and worsening of breathing difficulty. We obtained a chest x-ray which revealed a right-sided pneumothorax. A jolly No. 20 chest tube was placed in the 5th intercostal space, in middle axillary line. After chest CT documentations of its resolution, the chest tube was removed. However, there was a recurrence during hospitalization. We transferred the patient to Thoracic Surgery. She underwent wedge resection of the right upper lobe and right mechanical pleurodesis by video-assisted thoracic surgery (VATS). Subsequently due to new recurrence she was reoperated. The surgeons visualized diaphragmatic fenestrations, suggestive of de diagnosis of catamenial pneumothorax. They performed right pleurectomy and diaphragmatic talcage by VATS. Following surgery, she completed 6 months of hormonal suppression with monthly goserelin.
Discussion: Catamenial pneumothorax is a rare entity responsible for a large percentage of spontaneous pneumothoraces in women of reproductive age, that we must remember towards a young woman with a history of recurrent pneumothoraces. We describe a young woman with catamenial pneumothorax and diaphragmatic fenestrations. Her clinical course and operative findings support published data that show that diaphragmatic fenestrations are commonly present and involved in the pathophysiology of this condition. With the correct diagnosis it´s possible to treat these patients. This woman remains asymptomatic and without new recurrences for 2 years.

Keywords: *Pneumotorax. Catamenial pneumotorax. Diaphragmatic fenestrations.*

PE 062. CATAMENIAL PNEUMOTHORAX - A DIAGNOSIS TO SUSPECT

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Introduction: Catamenial pneumothorax is a rare entity that is defined by the presence of air in the pleural cavity in women of reproductive age, without concomitant pulmonary pathology. Characteristically, it occurs up to 72 hours before or after menstruation. There are no pathognomonic changes and the diagnosis is mainly clinical. Some criteria of suspicion include the temporal relationship with menstruation, its occurrence in the right hemithorax and the presence of characteristic pleural lesions such as defects/fenestrations in the tendinous region of the diaphragm or brown nodules in the visceral or parietal pleura. Histologically, these deposits contain glandular cells and endometrial tissue. The patients may also present with pelvic endometriosis in about 20-70% of cases. The treatment of choice is surgical, consisting in the removal of macroscopically visible nodules and the repair of pleural defects. The rate of recurrence after surgery varies between 8-40%, and the association with hormone therapy with gonadotropin-releasing hormone (GnRH) agonists and chronic anti-contraceptive therapy is indicated.
Case report: We present the case of a 35-year-old woman, with no relevant medical history and with no history of smoking or toxifilic habits. She was referred to the emergency department with complaints of a 7-day long dry cough and right posterior thoracalgia that worsened with the decubitus and deep inspiration. The pain started about 24 hours after menstruation. She denied dyspnea or other respiratory symptoms. Chest CT scan performed on the same day showed the presence of a right pneumothorax with areas of segmental atelectasis of the middle and lower right lung lobes, without deviation of the mediastinum or loss of lung volume on the right. Upon initial observation, the patient was clinically stable and eupneic in room air, showing a decreased vesicular murmur in the upper half of the right hemithorax with no ipsilateral vocal resonance. She underwent pneumothorax drainage with placement of a chest tube. During hospitalization, total expansion of the right lung was observed, without complications. She was discharged from the hospital and referred to a Thoracic Surgery appointment to decide on definitive treatment options. However, 3 days after discharge, she presented with right pneumothorax recurrence. VATS was then performed with the evidence of diaphragmatic defects and other intraoperative findings compatible with thoracic endometriosis. Right pleural talc was performed, without complications. She was discharged with indication for starting goserrelin - LHRH agonist - and referral to a Gynecology consultation to exclude pelvic endometriosis.
Discussion: Catamenial pneumothorax is an uncommon condition that should cause a high level of suspicion in women of childbearing age and who present with spontaneous pneumothorax, and it is imperative to assess the correlation between the onset of symptoms and menstruation. These patients should be evaluated in a multidisciplinary setting- Pulmonology, Cardiothoracic Surgery and Gynecology - for a correct diagnosis and the establishment of appropriate medical and surgical measures for treatment and prevention of recurrence.

Keywords: *Catamenial pneumothorax. Endometriosis.*

PE 063. MESOTHELIOMA- A CASE OF AN EXPLOSIVE PROGRESSION

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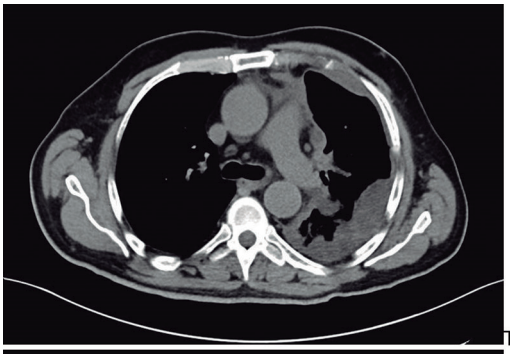
Introduction: The mesothelioma is a rare tumour that originates from mesothelial layers that line some organs. Despite its origin, the majority of these cases are caused by asbestos exposure (90%). Lately, the incidence of this pathology has been increasing in Europe because of the gap between the pathology's large latency period and asbestos exposure legislation.



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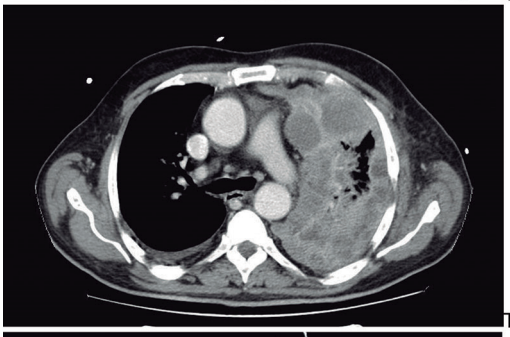

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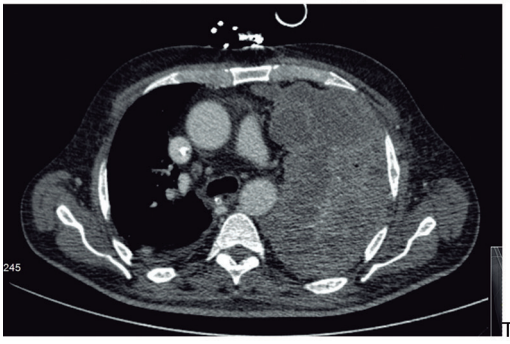

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Case report: The case is about a 65-year-old male, who previously worked in the metal industry and is an ex-smoker (15 packs/year). Formerly diagnosed with hypertension, heart failure, anticoagulated auricular fibrillation on Rivaroxaban and sigmoidectomy due to colon diverticulosis. The patient was admitted and presented with dry cough, asthenia, anorexia and significant weight loss. In the last week the patient complained of shortness of breath and left pleuritic thoracic pain. At admission the patient was lucid, hemodynamically stable, no alterations in the blood gas analysis and CRP of 5.76 mg/dL. The chest X-Ray showed an opacity on the left lower two thirds of the hemi-thorax suggestive of pleural effusion. A thoracentesis was performed from which resulted a sero-hematic fluid compatible with exudative of neutrophilic predominance according to the cytochemical test. A chest tube was placed, and 2.5L of pleural hematic fluid was drained. Microbiology and cytopathologic tests showed no changes. Chest-abdo-pelvic CT scan revealed a left pleural thickening encasing the lung and multiple nodules with heterogenic densities associated to an increased thickness of the interlobular fissures. In addition, a lower oesophageal adenopathy and undetermined nodularity on the right adrenal were found. Given the presence of a complicated pleural effusion the patient did a course of antibiotics - amoxicillin/clavulanic acid and clarithromycin. Due to an increase of the fever and decline of inflammatory parameters the patient went into septic shock and was forwarded to our Intensive Care Unit. The antibiotherapy was altered to Meropenem and Linezolid resulting in a positive clinical and analytical response, nevertheless non- invasive ventilation was still required. Twelve days after admission, the patient was reassessed by performing a thoracic CT scan that revealed a significant increase in size of the pre-existent pleural masses and an arising of multiple "de novo" masses which were predominately necrotic. These findings contributed to the near total atelectasis of the left lung. Also, in the subphrenic space splenic infarction areas were detected. After discussion at the MDT meeting, a transthoracic biopsy of the left lung mass was performed. Results showed morphology features and immunohistochemical markers consistent with malignant mesothelioma (epithelioid subtype). Despite the applied clinical measures, the patient's medical condition deteriorated significantly with worsening of the respiratory failure and progression of the neoplastic masses leading to his unfortunate passing on the twentieth day of admission.

Discussion: The morbidity and mortality associated with mesothelioma is directly influenced by its relentless local progression. Although the present case showed a rapid tumour progression, the literature states that the average survival time is 6 to 18 months. The leucocytosis, thrombocytosis and fever that result from the excessive production of cytokinins, frequently seen with these tumours, contributes to a worse prognosis.

Keywords: *Pleural tumours. Mesothelioma. Pleural effusion. Leukocytosis. Respiratory failure.*

PE 064. BLACK BRONCHOFIBROSCOPY

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Introduction: Endobronchial metastases from melanoma are rare, representing 4.5% of all endobronchial metastases. They are associated with an advanced stage of tumor progression and poor prognosis. They are usually diagnosed, on average, 48 months after the presentation of the primary tumor. The median overall survival of these patients is 6 months.

Case report: We present the case of a 76-year-old woman, non-smoker, with a history of malignant melanoma, who underwent amputation of the toe in 2016. In 2018, she presented pulmonary metastasis of melanoma and was submitted to wedge resection of the left upper lobe performed by video-assisted thoracoscopy (VATS). In the 2019 revaluation CT-Chest, local recurrence was demonstrated in the left upper lobe, with uptake in the PET-CT in the focus adjacent to the surgical suture. Proposed upper left lobectomy by VATS. During anesthetic induction, there was difficulty in the progression of the orotracheal tube, with aspiration of black content. A flexible bronchofibroscopy was immediately performed, which demonstrated extensive and exuberant infiltration of the tracheal mucosa by black pigment, from the subglottic trachea, reaching practically the entire tracheobronchial tree. It was also visible a fixed and enlarged carina and occlusion of the left main bronchus by a dark and hemorrhagic lesion. The anatomopathological examination of the pigmented fragments of the mucosa was compatible with melanoma metastasis.

Discussion: Melanoma should not be considered cured even after long disease-free periods, especially in high-risk patients with thick primary tumors or metastatic disease. Ultrasonography of the lymph nodes, CT-thorax or PET-CT can be used as methods of follow-up of the disease. The definitive diagnosis of endobronchial metastasis of melanoma is made by performing flexible bronchofibroscopy with biopsy of the lesions and must be performed before the surgical approach, especially if recurrent disease.

Keywords: *Melanoma. Lung metastasis. Bronchofibroscopy.*

PE 065. ENDOBRONCHIAL LESION - A RARE DIFFERENTIAL DIAGNOSIS

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Case report: The authors present the case of a male patient, 65 years old, with previous diagnoses of obesity, type 2 diabetes mellitus, prostate cancer, Severe Sleep Apnea Syndrome under CPAP followed up in a Pulmonology consultation. In consultation, due to surveillance of micronodules evidenced in previous exams, a chest CT scan was requested, which showed an oval opacity in the bronchial lumen, measuring about 8 mm at the level of the middle lobe. Bronchofibroscopy was performed with visualization of a pedicled endoluminal lesion at the level of the middle lobe, apparently suggestive of a carcinoid tumor. Rigid bronchoscopy was advanced, however with difficulty in passing the bronchoscope due to the patient's biotype. For this reason, only biopsies of the lesion were performed, and total tumor resection was not possible. The pathological anatomy of the biopsy was negative for neoplastic cells and a histology revealed flaps of the bronchial mucosa with subepithelial adipocyte hyperplasia, aspects that can be considered in the diagnosis of benign lipomatous tumor, namely lipoma. Maintains follow-up on consultation and surveillance of stable elimination.
Discussion: Endobronchial lipomas are rare benign tumors, representing about 0.1 to 0.5% of lung cancers. Its absence is more frequent from the fifth and sixth decade of life and predominates in males. These tumors are histologically benign, however they can cause important morbidity and can cause recurrent obstructive pneumonia. Symptoms at presentation are also dependent on the degree of airway obstruction proved by the injury, and may present with cough, dyspnoea or recurrent infections, or be asymptomatic. Treatment must be conservative and endoscopic resection is usually the treatment of choice and the definitive one. This is a case that demonstrates a rare diagnosis but that must be considered in the non-differential diagnosis of endobronchial lesions, specifically in differential diagnosis of carcinoid tumors.

Keywords: *Endobronchial lesion. Lipoma.*

PE 066. ENDOTRACHEAL LIPOMA

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Introduction: Tracheal tumors are rare (incidence of 0.2/100,000) and only 10 to 20% are benign. Of the latter, the most frequent are hamartomas, amyloids and papillomas. Endotracheal lipomas are, therefore, extremely rare, constituting between 2 to 4% of benign tumors. Its diagnosis is sometimes accidental, since patients remain asymptomatic until tracheal obstruction exceeds 70%. When symptomatic, the most common symptoms are: dry cough, wheezing, stridor and dyspnea.
Case report: We report the case of a 49-year-old patient, with no relevant personal history, except for active smoking, who presents with a noisy breathing and dyspnea that worsens with exertion. He is initially observed in an Otorhinolaryngology consultation, in June 2019, without further investigation except for videolaryngoscopy which has not shown relevant changes. At the beginning of the current year, due to persistence and worsening of respiratory complaints, he was referred to the Pulmonology consultation, where he presented with stridor. In this context, he undergoes a computed tomography of the chest that shows the existence of a tracheal lesion that was causing a stenosis of his lumen in 80%. After discussing the case, he underwent rigid bronchoscopy where an endotracheal mass 2.5 cm below the vocal cords was visualized, occupying about 80% of the tracheal lumen. Laser therapy was performed followed by debulking of the lesion, with complete removal of the lesion and achievement of complete patency of the tracheal lumen. Since the intervention, the patient presented showed no respiratory complaints and the histopathology of the lesion was compatible with a submucosal lipoma.
Discussion: These lipomatous lesions, as the name implies, are largely composed of fat. Given this composition, chest computed tomography can give a presumptive diagnosis and enable a first endoscopic approach, which is effective and safe, since these lesions are not likely to bleed. Tracheal resection and surgical reconstruction should only be considered in selected cases. The present work intends to alert to less common causes of dyspnea and stridor. In the exposed clinical case, the patient, being a smoker, ends up having a diagnosis with a good prognosis, which is an exception when it concerns to tracheal injuries.

Keywords: *Endotracheal lipoma. Rigid bronchoscopy.*

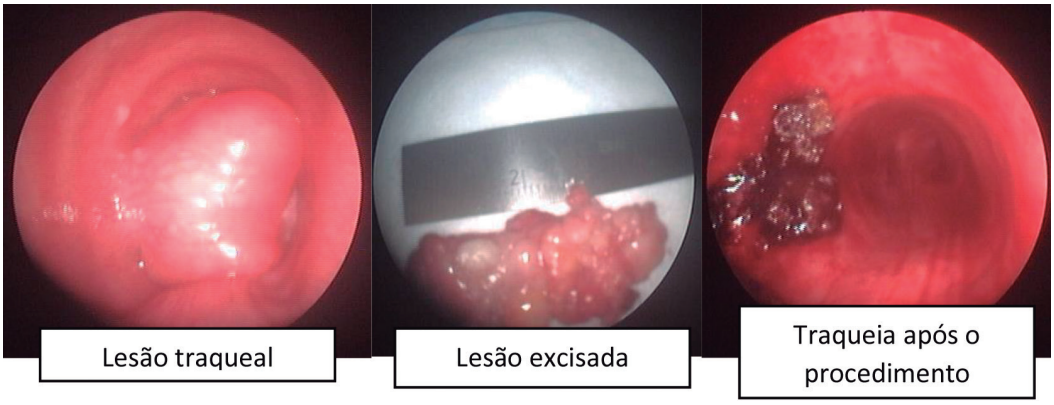

Figura PE 066

PE 067. ENDOBRONCHIAL LIPOMA - THE DISADVANTAGES OF BAD LOCATION

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Introduction: Benign lung tumours represent approximately 1% of lung tumors. These lesions are mainly parenchymatous, but benign endobronchial neoplasm also do occur. Lipomas are uncommon, representing about 0.1% of benign lung tumors. These type tumors are composed mainly of fat tissue, and have a slow growing rate. Endobronchial lipomas originate from the fat cells located in the peribronchial and occasionally the submucosal tissue of main bronchi.
Case report: A 52-year-old man, ex-smoker of 30 pack year, with history of L2 fracture without neurologic damage (about 10 years ago), and treated regularly for previously diagnosed diabetes mellitus, registered progressive dyspnea on exertion, cough, hemoptoic sputum episodes and a couple of mild infectious respiratory exacerbations in the past months. The patient denied any constitucional symptoms like anorexia or loss of weight, and initial evaluation had no laboratory or radiologic findings. After six months with maintained clinical status, further evaluation with thoracic TC scan revealed left lung damage with significative lung volume loss, cystic bronchiectasis, parenchymal consolidation and an endoluminal lesion in left main bronchus. Endoscopic examination revealed a smooth, well-circumscribed lesion occluding the left main bronchus, emerging within 2 cm distal to the carina. The biopsies failed to detect malignant cells, registering only fat and inflammatory cells. Due to clinical evidence and malignant suspicion, it was later performed a rigid bronchoscopy for mass excision. The endobronchial tumor was completely removed with rigid bronchoscopy. After pathological evaluation the final diagnosis was endobronchial lipoma. Since there was no further lung expansion after excision of the occlusive endobrochial lesion, the patient was proposed for left pneumectomy.
Discussion: Although its unfrequency, there appears to exist a relationship between these type of tumours with obesity and smoking habits. Patients with these conditions usually feel unspecific symptoms, like shortness of breath or cough, which may lead to misdiagnosis. Major complications are unusual and are related to bronchial obstruction, such as bronchiectasis, post-obstructive pneumonia and atelectasis. Literature points out that about two thirds of the endobronchial lipoma cases occur in the right tracheobronchial tree, and more frequently in the upper regions where the cartilage and adipocyts are more abundant. Endobronchial lipomas can be successfully removed with rigid bronchoscopy, and an early diagnosis is of major importance in order to preserve pulmonary function.

***Keywords**: Lipoma. Benign tumors of the lung. Tracheobronchial tree. Rigid bronchoscopy.*

PE 068. ERYTHEMA INDURATUM OF BAZIN – A RARE MANIFESTATION OF CUTANEOUS TUBERCULOSIS

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Introduction: Cutaneous tuberculosis is a rare entity with a wide spectrum of clinical presentations, which makes its challenging diagnosis. The erythema induratum of bazin is a reaction of hypersensitivity to the antigens of the Mycobacterium tuberculosis. It's a paucibacillary form which may not identify the bacillus in the lesions, through a direct exam, the search for nucleic acids (NAAT) or culture exam.
Case report: 82-year-old woman, leukodermic, Portuguese (with no history of recent foreign travelling) currently retired (Preschool educator). No relevant personal history. She was referenced to Dermatology due to presenting two lesions, in the anterior region of the leg (a papule with subcutaneous nodules and two erythematous-violaceous plaques, painless and non-ulcerated and non-pruriginous with a year of evolution. She didn't present a history of local trauma or thrombophlebitis. The patient denied night sweats, weight loss, respiratory symptoms or others which would suggest the assault of other organs. A skin biopsy was performed which showed lobular panniculitis with areas of necrosis, surrounding granulomatous inflammation and nodular vasculitis. The direct microbiological examination was negative. The IGRA was positive and the thorax CT scan didn't reveal any alterations. The analytical study didn't show any relevant alterations, with an autoimmune profile, HIV, HCV and HBV negative. Once other causes of erythema induratum de Bazin were excluded, and with a positive IGRA test, the diagnosis of cutaneous tuberculosis was assumed and a therapeutic scheme was initiated with rifampicin, isoniazid, pyrazinamide and ethambutol.
Discussion: Although cutaneous tuberculosis is uncommon, it should always be considered as a diferential diagnosis of cutaneous lesions of chronic evolution. The diagnosis can be difficult and be based on the correlation of clinical aspects (suggestive lesions), epidemiologic history, histopathologic elements, positivity of the drug-susceptibility test in tuberculosis or IGRA, and favourable response of the cutaneous lesions to the antituberculosis drugs. It is frequent not to obtain microbiologic confirmation.

***Keywords**: Mycobacterium tuberculosis. Hypersensitivity. Rare. Diagnosis.*

PE 069. PULMONARY TUBERCULOSIS IN AN IMMUNODEPRESSED PATIENT

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Introduction: The clinical manifestations of tuberculosis are often systemic and nonspecific, so early diagnosis can be difficult, particularly in immunocompromised patients and in extreme groups (children and adults). HIV infection poses a greater risk for disease progression.
Case report: A 51-year-old autonomous woman with a history of Human immunodeficiency virus (HIV)/Hepatitis C vírus (HCV) co-infection, with poor adherence to therapy, went to the ER for notion of loss of vision, pain and left red eye with a week of evolution. Complaints of fever, headache and odynophagia with a month of evolution. At admission to the emergency room, she was apyretic, hemodynamically stable, eupneic, with peripheral O2 saturation of 95% in room air, without meningeal signs, without skin changes, with normal pulmonary and cardiac auscultation. Analytically, she had lymphopenia (0.710×10^9/L), with CD4 + 52.0 mm^3 (9.4%) and CD4/CD8 0.16, PCR 8 mg/dL and reactive serology for HCV, treponema pallidum (IgM positive, RPR 1: 128, TPPA > 1280), HSV 1/2 (positive IgM and IgG) and CMV (positive IgG, negative IgM). Negative quantiferon. Chest radiography with bilateral reticulo-nodular infiltrate. High-resolution pulmonary CT showed extensive areas of parenchymal densification in both lungs, with cavitations of greater expression at the level of the upper lobes and apical segment of the lower lobes, findings compatible with cavitated tuberculosis, with endobronchial dissemination. The search for mycobacteria in sputum was positive with positive direct microscopic examination (++++). Bronchial-alveolar lavage was harvested with positive mycobacterial culture and negative Pneumocystis jirovecii test. She started therapy with isoniazid, ethambutol, pyrazinamide and rifampicin. After observation by ophthalmology, objectification of the cornea with stromal infiltrates, the hypothesis of cytomegalic retinopathy was raised,

so she started therapy with valganciclovir. Lumbar puncture was performed with a diagnosis of neurosyphilis, which led to therapy with ceftriaxone, which was carried out for 14 days. After 8 weeks, antiretroviral therapy (ART) with emtricitabine, tenofovir and raltegravir was started. On the 53rd day of hospitalization, after researching for mycobacteria was negative on direct microscopic examination, she was discharged, clinical better. Antibiogram of Mycobacterium tuberculosis without evidence of resistance, so she maintained anti-bacilliferous therapy and was directed to the local pneumological diagnosis center.
Discussion: Treatment of tuberculosis in the context of HIV infection is similar to that of the general population. However, paradoxical reactions during treatment are more frequent than in the general population. These include temporary exacerbations of symptoms or clinical and imaging manifestations, essentially in patients who start ART concomitantly, a condition recognized as the immune recovery syndrome, although it can also occur only when taking antituberculosis drugs. Currently, it is recommended that ART starts at 2 weeks of antituberculosis, if the CD4 count is less than 50 cells/mm^3, and between 8 and 12 weeks in the remaining patients.

Keywords: *Tuberculosis. HIV. Immunosuppression.*

PE 070. VALUE OF BRONCOFIBROSCOPY IN TUBERCULOSIS DIAGNOSIS WITH NEGATIVE BACILLOSCOPY

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Introduction: Pulmonary tuberculosis (TB) is a serious public health problem. An early diagnosis is essential to prevent its transmission. Taking into account the significant number of tuberculosis cases that have a negative mycobacterial test in sputum sample (SS), bronchofibroscopy (BFO) plays an important role in the diagnosis of patients without sputum or whose mycobacterial test of SS is negative.
Objectives: To evaluate the role of BFO in the diagnosis of pulmonary tuberculosis in patients whose results of the mycobacterial test in SS are negative.
Methods: Cross-sectional study of patients with suspected pulmonary tuberculosis who underwent BFO over a 6 month period in 2019-2020 at Hospital de Santa Marta.
Results: BFO was performed in 31 suspected cases of tuberculosis with negative direct mycobacterial test in SS, and the diagnosis was confirmed by cultural exam in 9 cases. The direct mycobacterial test was positive in only 1 patient while the nucleic acid amplification test (NAAT) was positive in 5 patients. Of the remaining 22, 5 obtained other microbiological isolations, in 7 other diagnoses were made during the study, and in 10 cases no bacteriological diagnosis was obtained. The most frequent imaging pattern was cavitation. Of the patients who underwent BFO, 10 were immunosuppressed. There were no reports of complications from the exam.
Conclusions: The present study showed that BFO can lead to diagnosis in 29.0% of suspected cases with negative mycobacterial test in SS. When it is not possible to obtain a SS, BFO can be a safe method, avoiding inadvertent delays in diagnosis and institution of appropriate treatment.

Keywords: *Pulmonary tuberculosis. Bronchofibroscopy.*

PE 071. AN ATYPICAL PRESENTATION OF PULMONARY TUBERCULOSIS

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Introduction: Pulmonary tuberculosis disease has a high morbidity and mortality worldwide. Although Portugal is not an endemic country, this pathology must be considered in the evaluation of the patient in the pulmonology consultation.
Case report: Male patient, 24 years old, student. Tobacco smoker and hashish. He denied occupational exposure. Diagnosis of bronchial asthma at age 12, without medical follow-up, not medicated. Referenced by the GP to the Hospital Pulmonology Consultation for occasional mild dyspnoea, non-productive night cough, nasal congestion and itchy eye, associated with episodes of anxiety and exposure to cat hair in the last five months, which coincides with the onset of symptoms. During this period, he went twice to the Emergency Department, discharged with ICS+LABA, having suspended after 15 days due to symptomatic improvement. The functional respiratory study highlighted mild and bronchiolar obstruction, pulmonary insufflation and positive bronchodilation test. At the consultation, he was asymptomatic, presenting the symptoms above in periods of anxiety and when exposed to the cat (3x/week). Allergic bronchial asthma was admitted for which he started ICS+LABA, nasal corticosteroids and oral antihistamine in SOS, with indication for avoidance of allergens and cessation of consumption. He remained asymptomatic until the next consultation, without resorting to SOS therapy. Laboratory tests showed 290 eosinophils, total IgE 1,295 KU/L, positive phadiatop; Specific IgE positive for plant pollen, grass pollen, cat dander (> 100); Posteroanterior thorax teleradiography with bilateral hilar reinforcement and heterogeneous hypotransparency with rounded edges in the upper 1/3 of the right pulmonary field, best characterized by chest CT scan which revealed to be a hypodense nodular serpiginous structure (48 × 17 mm), in the posterior segment of the upper lobe right, in contiguity with paravertebral vascular structure, suggestive of solid nodular lesion vs vascular malformation. Diagnostic bronchofibroscopy was performed, which showed no macroscopic changes. Bronchial secretions (BS) were positive for Aspergillus niger, not isolated in bronchoalveolar lavage or bronchial biopsies; BS had direct negative and cultural positive mycobacteriological examination for Mycobacterium tuberculosis complex multisensitive. No identification of neoplastic cells. In view of the diagnosis of pulmonary tuberculosis, a complementary laboratory evaluation was requested, after excluding risk factors. The research of serum Ag Galactomannan and the assay of specific IgE for normal Aspergillus fumigatus and niger stands out. The patient was referred to the pneumological diagnosis centre where he started therapy with isoniazid, rifampicin, pyrazinamide and ethambutol (2 months), followed by isoniazid and rifampicin (4 months), without complications, with imaging improvement.
Discussion: The importance of the case is highlighted by its rarity. This is a patient with symptoms suggestive of uncontrolled allergic asthma, referred by primary health care for evaluation and therapeutic optimization by the specialty; chest X-ray was crucial in the patient's diagnostic gait, attesting to the importance of this examination in the differential diagnosis of bronchial asthma. It should also be noted that pulmonary tuberculosis disease has multiple clinical manifestations and should always be considered as a diagnostic hypothesis in the pulmonology consultation, even in the absence of a clinical or epidemiological context suggestive of the disease.

Keywords: *Asma. Pulmonary tuberculosis. Mycobacterium tuberculosis.*