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EXPOSED POSTERS

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PE 001. ASPIRIN-EXACERBATED RESPIRATORY DISEASE (AERD) – A SUCCESSFUL CASE

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Introduction: DREA is characterized by the pathognomonic triad composed of severe asthma, nasal polyposis, and hypersensitivity to aspirin (AAS) or other nonsteroidal anti-inflammatory drugs (NSAIDs). It is estimated to affect approximately 9% of patients with chronic rhinosinusitis associated with nasal polyposis and 15% of individuals with severe asthma.
Case report: a 38-year-old male, a merchant, presented to the Emergency Department with dyspnea and the development of a skin rash after taking aspirin at home. Relevant medical history includes late-onset severe asthma and chronic rhinosinusitis with nasal polyposis, having already undergone two polypectomies. On examination, the patient was tachypneic, with arterial oxygen saturation (SatO2) at 91% on room air, decreased breath sounds, presence of wheezing and bronchospasm, and scattered hives on the trunk and limbs. Laboratory analysis revealed an eosinophilia count of 370, and a chest X-ray showed hyperinflation. Despite optimized inhaled therapy, the patient remained highly refractory to treatment, experiencing numerous asthma exacerbations and requiring frequent visits to the Emergency Department. During the anamnesis, the patient reported a similar reaction in the past, with dispersed skin rash, itching, and dyspnea after taking metamizole, indicating a case of DREA. Given the diagnosis of DREA, the possibility of aspirin desensitization was considered as a treatment option. However, due to the risk of anaphylaxis, a multidisciplinary decision was made to initiate treatment with the biologic therapy mepolizumab, indicated for the treatment of nasal polyposis associated with severe eosinophilic asthma. The patient was followed up in the clinic, and after 3 months of biologic therapy, significant clinical improvement was observed with control of asthma and rhinosinusitis symptoms, without new exacerbations or detectable adverse effects.
Discussion: Aspirin desensitization is recommended for patients with DREA whose symptoms are not controlled with conventional therapy. However, it is considered a high-risk procedure and requires various safety measures for its execution. Currently, with the advancement of biologic therapies, mepolizumab has gained a prominent role in the symptomatic control of these patients, especially in those with severe eosinophilic asthma associated with nasal polyposis.

Keywords: *Asthma. Chronic rhinosinusitis. Nasal polyposis. Biologic therapy.*

PE 002. SPONTANEOUS PNEUMOMEDIASTINUM – A POSSIBLE COMPLICATION ASSOCIATED WITH ASTHMA EXACERBATIONS

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Introduction: Pneumomediaastinum is an uncommon entity resulting from alveolar rupture and air migration to the mediastinum as consequence of a rise in intrathoracic pressure (Valsalva maneuver, for example) or a rise in the pressure inside the airways (barotrauma, asthma or foreign bodies).
Case report: A woman, 19 years old, with personal history of atopic eczema, allergic rhinitis and asthma, previously medicated with inhaled terbutaline and nasal fluticasone furoate, both only as a rescue therapy, and oral hormonal anticonceptional went to the emergency department with dyspnea, tiredness and nasal congestion for the past week. On physical examination she was eupneic at rest and without supplemental oxygen, 97% on pulse oximetry, loud wheezing and a clear fatigue with speech. The heart rate was 144 bpm and she was apyretic. Pulmonary auscultation revealed a symmetric and maintained vesicular murmur and clear audible and disperse wheezes bilaterally. Blood tests revealed leukocytosis and neutrophilia, a C Reactive Protein of 51.1 mg/dL and a d-dímer test of 769 ug/L. The blood gas analysis and the chest X-ray showed no changes. To further clarify the case, a pulmonary angiography by computerized tomography was performed revealing the presence of a "mild pneumomediastinum close to the carina, extending anteriorly to the main left bronchus". The patient was hospitalized for a few days and then discharged with a scheduled pulmonology appointment.

Discussion: Despite pneumomediastinum being an uncommon entity, usually self-limited and its treatment consists only of supportive measures. However, it is important to emphasize the importance of adequate assessment of possible causes, such as asthma, foreign bodies, tumors and other lung parenchyma diseases, as well as possible complications such as pneumothorax.

Keywords: *Spontaneous pneumomediastinum. Asthma exacerbation pneumothorax.*

PE 003. REMODELING IN SEVERE ASTHMA – AN ATYPICAL MANIFESTATION AND BIOLOGICAL THERAPY RESPONSE

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Introduction: Airway remodeling is an important component of several chronic respiratory diseases, particularly severe asthma. Airway remodeling's pathophysiology includes smooth muscle hyperplasia and hypertrophy, subepithelial fibrosis, mucus hyperproduction, angiogenesis and inflammation, leading to a fixed airway obstruction on pulmonary function tests (PFTs) despite the treatment. As atelectasis or segmental obstruction is a rare complication in an adult asthmatic patient, it could be associated with the remodeling process.

Case report: A 52-years-old female, quality controller worker in the food industry, non-smoker, with a history of overweight (BMI 26 kg/m^2) and laparoscopic surgery for gastroesophageal reflux. The patient was diagnosed with allergic and eosinophilic asthma with onset of symptoms at age 33 (positive test for dog and cat allergens, total IgE 115.8 UI/mL, marked eosinophilia [max 2,200/l], PFTs with moderate obstructive ventilatory impairment [FEV1 1.82 L, 64.8%], no significant improvement after bronchodilators). She had poor symptomatic control (ACT 3 |CARAT 9/8) and frequent exacerbations, despite prescribing of GINA Step 5 treatment. Autoimmune study, including negative ANAs and ANCAS. Computed tomography (CT) of the chest showed evidence of atelectasis of the anterior/lateral segment of the right and left lower lobes, significant bronchial wall-thickening and signs of compensatory hyperinflation. In bronchofibroscopy there was evidence of decreased caliber in all segments of the right lower lobe bronchus and left lower lobe bronchus, patent after instillation of saline, mucosa with edematous appearance and associated secretions, but no visible lesions or foreign bodies. Normal cardiac exams and sleep study were performed. Given the frequent asthma exacerbations, some of which associated with infectious complications and several courses of antibiotics ± systemic corticosteroid therapy (in which radiological examinations [teleradiography and/or chest CT] showed persistent areas of atelectasis), systemic corticosteroid therapy was initiated. Correct inhalation technique and adherence were confirmed, comorbidities were excluded, anti-influenza and anti-pneumococcal vaccination were completed and a respiratory rehabilitation program was included with partial improvement. Subsequently, it was discussed in a multidisciplinary severe asthma meeting and it was decided to start biological treatment with benralizumab 30 mg. After that a great clinical improvement was observed, with a decrease in dyspnea, wheezing and improvement on exercise tolerance (ACT 20|CARAT 29), as well as the absence of new exacerbations. The complementary study highlights the absence of eosinophilia in the leukogram, functional improvement (FEV1 1.93L 72.7%) and resolution of atelectasis in both lower lobes. Thus, it was possible to gradually discontinue systemic corticosteroid therapy.

Discussion: The airway remodeling mechanism in severe asthma is still not fully understood and little is known about short- or long-term impact of biological therapy on this mechanism. Thus, the authors present this case due to the rarity of atelectasis/segmental obstruction as an adult manifestation of airway remodeling in asthma and due to the favorable, and sustained response, to the administration of biological treatment with benralizumab.

Keywords: *Severe asthma. Remodeling. Atelectasis. Biological therapy. Benralizumab.*

PE 004. IMPACT OF COVID-19 INFECTION IN PATIENTS WITH SEVERE ASTHMA UNDER BIOLOGICAL THERAPY

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Introduction: The management of asthmatic patients during the pandemic and post-pandemic period has been challenging. Although there is no evidence of an increased risk of SARS-CoV-2 infection or its severity in these patients, recent studies suggest worsened asthma control and the need for escalated therapy after recovery from COVID-19. There is still no evidence regarding the subgroup of patients with severe asthma under biological therapy. We present two cases of patients with severe asthma under biological treatment experiencing symptomatic aggravation following SARS-CoV-2 infection.

Case reports: Case report 1: 52-year-old non-smoking woman with a history of asthma, allergic rhinoconjunctivitis, hypertension, diabetes mellitus secondary to corticosteroid use, benign follicular thyroid tumor and osteoarthrosis. Followed in the Severe Asthma outpatient clinic: initial ACT score of 12; eosinophils 900 cells/L, IgE 109 IU/mL; positive skin prick tests for dust mites and dog; pulmonary function study showed moderate obstructive ventilatory alteration with negative bronchodilator response (FEV1/FVC 63%, FEV1 61%); chest CT normal. She started mepolizumab in September 2019 and maintained triple inhaled maintenance therapy with good symptomatic control (ACT 22), reduced exacerbations, decreased corticosteroid need, normalized eosinophilia and functional stability. She had mild COVID-19 infection in January 2022. She continued to experience persistent fatigue and wheezing, with multiple visits to the emergency department and the need for systemic corticosteroid cycles. ACT 8. Therapy compliance was confirmed and comorbidity management was optimized. Her eosinophil count was 500 cells/L, and functional aggravation was evidenced by a decrease in FEV1 to 55.9%, with chest CT showing no relevant alterations. Biological therapy was changed to benralizumab in May 2023, resulting in improved symptomatic control (ACT 21). Case report 2: 66-year-old non-smoking woman with a history of eosinophilic asthma, hypertension, type 2 diabetes mellitus, osteoporosis, and depressive syndrome. Followed in the Severe Asthma outpatient clinic: initial ACT score of 15; pulmonary function study showed mild obstructive ventilatory alteration with a positive bronchodilator response (FEV1/FVC 57%, FEV1 73%); chest CT normal. She started benralizumab in January 2020 with good symptomatic control (ACT 23) and functional improvement (FEV1 82%). She had severe COVID-19 infection in October 2021, requiring hospitalization and respiratory support with CPAP. After the resolution of the infection, she experienced worsened functional status (FEV1 61%) and asthma control (ACT 16). Chest CT showed no relevant parenchymal changes. Biologic therapy was switched to reslizumab 250 mg in March 2022, resulting in significant improvement. After 1 year, she maintained good symptomatic control (ACT 23) and functional improvement (FEV1 70%).

Discussion: The real impact of SARS-CoV-2 infection on asthmatic patients is still not fully clarified. In these two patients, the chronological clinical evolution, along with the exclusion of other factors contributing to worsened asthma control, suggests that it may be a

consequence of previous COVID-19 infection. Further studies are needed to assess the relationship between COVID-19 and asthma control, particularly in the subgroup of patients with severe asthma under biological therapy.

Keywords: *Severe asthma. Biologic therapy. COVID-19.*

PE 005. SPONTANEOUS PNEUMOMEDIASTINUM AS ASTHMA INAUGURAL EPISODE

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Introduction: Pneumonediastinum is a rare, typically self-limiting condition defined by the presence of air in the mediastinum, considered spontaneous when not secondary to trauma. Several predisposing factors have been described, including asthma exacerbation.
Case report: 20-year-old man, autonomous, smoker for 2 years with a smoking load of 0.7 UMA, with no personal history to highlight, no usual medication and no previous diagnosis of asthma. He was admitted to the Emergency Department with a 3-day history of an initially dry cough, which later turned into a productive cough with purulent characteristics, fever, nocturnal wheezing, dyspnea and fatigue on exertion, and precordial and interscapular thoracalgia that worsened with coughing. On admission to hospital he was polypneic with scattered bronchospasm and wheezing on lung auscultation, and on arterial blood gas analysis he had partial respiratory failure with PaO2 57.2 mmHg on room air. Analytically, inflammatory parameters were also elevated and, imaging, chest CT angiography showed no apparent changes in lung parenchyma densification suggestive of an inflammatory process, no pneumothorax, but a small-volume pneumomediastinum. Bacterial sobreinfection of acute viral tranqueobronchitis was assumed, with no isolation of infectious agent in sputum culture tests and negative respiratory virus research. He was admitted to the Pulmonology Department and underwent 5 days of empirical antibiotic therapy with Azithromycin, with resolution of sputum, cessation of fever and reduction of inflammatory parameters. Respecting the diagnosis of pneumomediastinum, the patient underwent bed rest, surveillance and imaging control by chest radiography, with apparent stability; chest CT was repeated about 1 week later, with no evidence of pneumomediastinum. Due to the exuberant diffuse bronchospasm, the diagnostic hypothesis of asthma exacerbation in the context of respiratory infection was considered, although without a previous diagnosis of asthma. He was treated with systemic corticosteroid therapy for 5 days, with prednisolone 40 mg/day. Throughout hospitalization with marked clinical improvement and resolution of partial respiratory failure. From the clinical and complementary investigation carried out, he described a history of atopy in childhood with resolution in adolescence, denying allergies and symptoms suggestive during physical exertion, however he reported sporadic nocturnal wheezing since he started smoking, which he did not value. Laboratory tests showed increased total IgE of 353.0 U/mL and positive PADIATHOP (ratio 26.8), supporting the diagnostic hypothesis of allergen-induced asthma.
Discussion: Spontaneous pneumomediastinum was assumed in the probable context of an initial asthma episode, and he was discharged with an indication for smoking cessation and avoidance of diving activities. He was also medicated with inhaled budesonide and formoterol fumarate. He was evaluated in an outpatient clinic after discharge, complying with the inhaled therapy regimen and without new episodes of nocturnal wheezing. He is awaiting respiratory function tests and allergy skin tests.

Keywords: *Spontaneous pneumomediastinum. Asthma.*

PE 006. ASSOCIATION BETWEEN BRONCHIECTASIS AND ALPHA-1-ANTITRYPSIN DEFICIENCY – DOES AUGMENTATION THERAPY PLAY A ROLE IN REDUCING EXACERBATIONS?

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Introduction: Alpha-1-antitrypsin deficiency (AATD) is a codominant autosomal disorder characterized by mutations in the SERPINA1 gene. Currently, multiple pathological variants and genotypes have been identified. Among these, the Pi*ZZ genotype carries an increased risk of respiratory infections, due to the close relationship with the development of structural lung disease. In addition to the increased risk of emphysema, AATD as an etiologic factor and determinant of severity in bronchiectasis has recently assumed a prominent role.
Case report: We present the case of a 58-year-old woman, occasional ex-smoker, with a personal history of childhood asthma and treated pulmonary tuberculosis. She was referred to a Pulmonology consultation with long term complaints of productive cough, mucopurulent sputum and recurrent respiratory infections, requiring several cycles of antibiotic therapy. Pulmonary function test revealed a severe obstructive impairment (FEV1/FVC 66%, FEV1 1,080 ml/48.3% predicted). Chest computed tomography showed exuberant cystic and varicose bronchiectasis in the right upper lobe, lingula and both lower lobes with bilateral centrilobular emphysema, predominantly at the lung bases. During the etiological study, we detected a reduced AAT serum level of 22 mg/dL [80-220 mg/dL]. Viral serologies, immunoglobulins, SR, PCR and autoimmunity screening were negative. Phenotyping and genotyping allowed to identify a c.1096G>A p. mutation (Glu366Lys) of the SERPINA 1 gene in homozygosity, compatible with the Pi*ZZ genotype. Augmentation therapy with human-derived AAT (prolastin®, 60 mg/kg/week) was started in 2022. Due to a documented episode of drug hypersensitivity, therapy was switched to Respreeza® in the same posology. After this adjust, the therapy was well tolerated by the patient, which reported substantial clinical improvement, along with lung function stability and a significant reduction in the exacerbations number, aspects that currently maintains, in this first therapy year.
Discussion: AAT is a serine protease inhibitor that has been demonstrated to play a major role in regulating inflammatory activities through anti-protease activity and inhibition of TNF- and IL-1 levels. Its potent immunomodulatory and anti-inflammatory power may have an important role in treatment of conditions different from pulmonary emphysema, such in bronchiectasis. Screening bronchiectasis patients for AATD is recommended by several study groups.

Keywords: *Bronchiectasis. Alpha-1-antitrypsin. Exacerbations.*

PE 037. TARGETED THERAPY IN THE (RE)ACTIVATION OF SARCOIDOSIS – REGARDING A CLINICAL CASE

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Introduction: Diagnosis of exclusion, Sarcoidosis is characterized by variable evolution and systemic involvement, which are potentially conditioned by multiple factors, namely pharmacological – such as targeted therapies with cytotoxic and immune-mediated mechanism of action.
Case report: Man, 49 years old, maneuverer of industrial machines, followed in Oncological Dermatology for Melanoma of the 4th toe of the right foot (stage IIIB) excised 5 years before, referred to the Pulmonology consultation after detection of calcified pulmonary nodule in the right upper lobe and mediastinal adenopathies (ADN). For-

mer smoker, without respiratory complaints, alterations in the objective examination or chronic therapy, the patient was discussed in a group meeting and made a complementary study with analyses, Respiratory Function Tests (PFR) (both normal) and HRCT-Chest, which confirmed the presence of mediastinal ADN. In the suspicion of tumor recurrence, Bronchial Endoscopy (EBUS) was performed, whose anatomopathological results (AP) were negative for neoplasia. Maintaining mediastinal ADN in the various control tests, 6 years after oncological diagnosis, the patient developed a skin lesion on the inner face of the right leg, whose excision confirmed that it was melanoma metastasis, positive for BRAF. In monthly reevaluation, the appearance of a new papular lesion at the graft site, also excised and equally diagnostic of melanoma metastasis, BRAF+. In this context, assumed metastatic melanoma at the cutaneous and mediastinal ganglion level and decided to start targeted therapy with Encorafenib 450 mg id and Binimetinib 45 mg 2id. After one year of well-tolerated targeted therapy, the patient presented with important constitutional symptoms and related to several systems, namely ophthalmological, musculoskeletal and cutaneous. With repeated HRCT-thorax, micronodulation, discrete subpleural reticular pattern and increased ADN (pretracheal, loca de Barety, aortopulmonary window, subcarinal, right pulmonary hilum...) were identified – equating neoplastic progression versus extensive inflammatory involvement. Imposing the distinction between disease progression and inflammatory pathology, he repeated EBUS and performed BAL (with lymphocytosis). With AP results of non-necrotizing granulomatous lymphadenitis, of sarcoid type, and excluding other causes, considered a diagnosis of Sarcoidosis and started corticosteroid therapy in progressive weaning (and without discontinuation of targeted therapy). The patient became clinical and imagiologically better, without respiratory symptoms or alterations to the objective examination and maintaining PFR and normal analyses, and so was assumed Thoracic Sarcoidoses stage I without indication for directed therapy. Currently, the patient still in annual consultation – with PFR, analyzes and HRCT-Thoracic – along with the control of their oncological disease.
Discussion: The clinical case is presented for reflection on the possibility of activation/worsening of Sarcoidosis by certain therapies – which does not necessarily require its interruption, but concomitant management –, as well as to highlight the importance and difficulty around the exercise of differential diagnosis. Since Sarcoidosis is a diagnosis of exclusion, it is essential to affirm/deny progression of oncological disease as a cause of clinical and/or imaging changes in an appropriate context.

Keywords: *Melanoma. Targeted therapeutics. Sarcoidosis. Immune-mediated events.*

PE 038. DENDRIFORM PULMONARY OSSIFICATION – A CLINICAL CASE

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Introduction: Pulmonary ossification is a rare finding, characterized by the presence of mature bone in the alveolar or interstitial spaces, either localized or disseminated throughout the lung parenchyma. It may be idiopathic or secondary to chronic pulmonary, cardiac, or systemic diseases. It is classified as nodular (circumscribed) or dendriform (branched).
Case report: Male patient, 73 years old, former smoker of 35 pack-years, retired from an administrative job, with a history of atrial fibrillation, dyslipidemia, and chronic venous insufficiency, chronically medicated for his pathologies, was referred to the pulmonology consultation of Diffuse Pulmonary Diseases (DPD) due to respiratory symptoms associated with imaging changes in thoracic CT scans. In the DPD consultation, he mentioned productive cough, dyspnea, and tiredness for small efforts with months of evolution. In the functional respiratory study, the parameters were within normal limits. Laboratory tests revealed normal levels of calcium, phosphorus, and alkaline phosphatase. No alterations in renal function were identified. A sleep study was carried out (PSG level III), which revealed an AHI value of 21.6/h, translating into moderate OSAS. On the echocardiogram, the patient had mild mitral, tricuspid, and aortic insufficiency, with preserved ejection fraction. In the high-resolution chest CT scan, a slight interstitial thickening was identified, predominantly in the lower lobes, mainly peripheral, with a reticulomicronodular aspect with dense areas, which indicated a possible context of pulmonary ossification. After discussion in a multidisciplinary meeting, the presence of imaging alterations compatible with Dendriform Pulmonary Ossification was assumed. Considering the clinical stability of the patient and the absence of alterations in the functional respiratory study, it was decided to maintain vigilance and postpone the performance of a lung biopsy for histological confirmation.
Discussion: Dendriform pulmonary ossification is often associated with pathologies such as: histoplasmosis, idiopathic pulmonary fibrosis, pulmonary metastases from osteogenic sarcoma, pulmonary amyloidosis and Goodpasture's syndrome. Some studies also mention a correlation between episodes of recurrent chemical aspiration, such as those that occur in pathologies such as GERD and OSAS, with the development of pulmonary ossification. It often affects middle-aged men and is asymptomatic, so it is often incidentally diagnosed at autopsy. Thus, a high level of suspicion is necessary from an imaging point of view in order to diagnose and monitor this clinical condition in life.

Keywords: *Dendriform pulmonary ossification. OSAS. Autopsy.*

PE 039. HEMOPTYSIS AS THE FIRST MANIFESTATION OF IMMUNOGLOBULIN G4-RELATED LUNG DISEASE: CASE REPORT

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Introduction: The presence of a lung mass is a matter of concern for both the patient and the physician, due to the extensive list of differential diagnoses, requiring a prompt identification of its etiology. The authors present a case of recurrent hemoptysis as the manifestation of a pulmonary mass caused by immunoglobulin G4-related lung disease (IgG4-RLD).
Case report: 70-year-old male, with a personal history of ischemic heart disease, with unstable angina in August 2022, being medicated with acetylsalicylic acid and ticagrelor in this context. He went to the emergency department in December 2022 due to moderate volume hemoptysis with 1 week, without any other associated complaint. The initial bloodwork showed a slight increase in C-reactive protein and a moderate increase in the erythrocyte sedimentation rate; platelets levels and coagulation study were unremarkable. The immunological study showed increased serum levels of IgG4. Thoracic computerized tomography (CT) revealed the presence of a pulmonary mass in the right lower lobe, with a maximum diameter of 54 mm. Flexible bronchoscopy was performed, showing the presence of hematic vestiges throughout the right bronchial tree and a clot in the middle lobe bronchus, with no signs of active hemorrhage. Bronchoalveolar lavage was performed; cellular study documented increased total cellularity, lymphocytosis (20%) and neutrophilia (14%). A transthoracic lung biopsy (TTLB) was proposed, but preliminary CT scan documented regression of the lesion's dimensions, and biopsy was not performed. The patient was discharged with antifibrinolytics and suspension of ticagrelor, with-

out hemoptysis. He relapsed in February 2023, presenting hemoptysis lasting a week despite fixed antifibrinolytic use. A new thoracic CT scan revealed a dimensional increase in the lung mass described. TTLB was ultimately performed. The immunohistochemical study carried out revealed the presence of fibrosis and a lymphoplasmocytic-predominant infiltrate, with identification of a high amount of plasma cells positive for IgG4. The diagnosis of IgG4-RLD was established. At the time of diagnosis, the patient had no evidence of extrathoracic disease, with subsequent proton emission tomography confirming the absence of alternative sites of disease. The patient remains asymptomatic without the need for antifibrinolytics or immunosuppressive treatment and is being monitored through regular outpatient appointments with Pulmonology and a department of Autoimmune Diseases.
Discussion: IgG4-related disease is a recently recognized entity, consisting of the inflammatory infiltration of one or more organs by plasma cells rich in IgG4, with the lung seldom being affected. IgG4-RLD can be asymptomatic, or present with a myriad of respiratory symptoms, including hemoptysis. Manifestation as a lung mass is uncommon but possible, making it a very unlikely differential diagnosis of a lung mass.

Keywords: *Immunoglobulins. Hemoptysis. Lung mass. Lung disease associated with IGG4.*

PE 040. LYMPHANGIOLEIOMYOMATOSIS AND THE CASE OF THE VANISHING ANGIOMYOLIPOMA

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Introduction: Lymphangioleiomyomatosis (LAM) is a rare multisystemic disease that predominantly affects women of childbearing age. It is characterized by the presence of diffuse bilateral pulmonary cysts and renal and lymphatic angiomyolipomas (AML). The etiopathogenic mechanism is unknown, but it has been established to be related to the proliferation of immature smooth muscle cells. Follow-up of these patients should pay attention to the progression of lung disease, without overlooking the possibility of AML development, as its evolution may increase the risk of potentially fatal hemorrhages.
Case report: We present the case of a 48-year-old woman, a computer engineer, with a history of left hemithyroidectomy due to benign nodular pathology. The patient is under hormonal replacement therapy with levothyroxine. LAM diagnosis was made in 2000 through surgical biopsy. She had previously been medicated with medroxyprogesterone (hormonal therapy) for 6 years. During follow-up, she experienced recurrent bilateral pneumothoraces and underwent partial pleurectomy with talc pleurodesis on the right side and surgical talc pleurodesis on the left side. In 2010, the patient was referred for lung transplantation evaluation, but decided to not be included on the transplant list at that time. Due to worsening dyspnea, leading to mMRC functional class 3, and progressive respiratory failure, she accepted being referred for transplantation. In February 2013, she underwent right unilateral lung transplantation and started immunosuppressive therapy with prednisolone, mycophenolate mofetil (MMF), and tacrolimus. Subsequent and recurrent pneumothoraces on the contralateral side, of small dimensions, were conservatively managed. In the 2020, computed tomography evaluation of the chest and abdomen identified a "collection of liquid image, with multiple loci, extending 13 × 10 × 4.5 cm, involving the retroperitoneal vessels, displacing the pancreas and the third portion of the duodenum, without causing compression of the ureters, related to cystic AML". Optimization of immunosuppressive therapy was proposed to achieve better control of LAM and AML. MMF was discontinued, and sirolimus was initiated, while the rest of the medication (tacrolimus and prednisolone) was maintained. Three years after the therapeutic change, symptomatic improvement was observed, without recurrence of left sided pneumothorax, stable respiratory function, and complete regression of the retroperitoneal AML image. The patient continues under clinical, functional, and imaging surveillance.
Discussion: In LAM, AMLs smaller than 4 cm in diameter are typically well-tolerated without the need for targeted therapeutic intervention. The main complication of larger AMLs is hemorrhage. mTOR inhibitors (sirolimus and everolimus) have shown efficacy in reducing tumor size (with some cases documenting complete regression), preventing hemorrhage, and reducing the need for invasive interventions such as embolization or surgery. Discontinuation of these medications may lead to AML recurrence and an increase in its size.

Keywords: *Lymphangioleiomyomatosis. Angiomyolipoma. MTOR inhibitor. Sirolimus.*

PE 041. BIRT-HOGG-DUBÉ: TWO DIFFERENT PRESENTATIONS

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Introduction: Birt-Hogg-Dubé syndrome (BHDS) is a rare hereditary condition characterised by benign cutaneous lesions, lung cysts, increased risk of spontaneous pneumothorax and renal cancer. It shows heterogenous presentation within affected individuals. We present 2 case-reports that illustrate disease variability.
Case reports: Case 1: A previously healthy 41-year-old patient, referred to the Pulmonology Department for CT-scan abnormal findings: multiple cysts in the basal parts of the lung, bilaterally. At physical examination she had fibrofolliculomas and trichodiscomas in the face. She had no respiratory symptoms. Laboratory data (including alfa-1 antitrypsin) and Pulmonary Function Tests were normal. Genetic screening revealed a mutation in the FLCN gene, which confirmed the diagnosis of Birt-Hogg-Dubé Syndrome. Patient has developed no respiratory symptoms to the date. Case 2: A previously healthy 15 years-old, presented in the Emergency Room with dyspnoea and pleuritic thoracic pain. Chest X-Ray showed bilateral pneumothorax. Family history was notorious for recurrent spontaneous bilateral pneumothorax. Physical examination was unremarkable. Complementary studies were performed: laboratory results and Pulmonary Function Tests were normal. CT-Scan showed subpleural bilateral apical bullae. Genetic studies were inconclusive, and blood samples were sent to a Reference Center – and later confirmed the diagnosis. During follow-up, patient had several recurrences of pneumothorax: 2 right sided and 2 left sided. Surgery of bullae resection was performed and histology revealed emphysematous bullae, fibrosis and chronic inflammatory infiltrates. Unfortunately patient then lost follow-up.
Discussion: Because of its rarity, Birt-Hogg-Dubé is likely mistaken for primary spontaneous pneumothorax or emphysema. An early diagnosis is of extreme relevance to set up screening for renal cancer in patients and affected relatives.

Keywords: *Birt-Hogg-Dubé. Pneumothorax. Lung cysts.*

PE 042. CONGENITAL PULMONARY AIRWAY MALFORMATION: A DIAGNOSIS RARELY ESTABLISHED IN ADULTHOOD

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Introduction: The Congenital Pulmonary Airway Malformation (CPAM), formerly known as congenital cystic adenomatoid malfor-

mation, is a rare condition characterized by anomalies in embryogenesis that can affect various stages of lung development and leading to abnormalities in bronchial morphogenesis. Typically, CPAM is diagnosed in-utero or during the neonatal period, and its clinical presentation is variable. Children with CPAM may be asymptomatic or present respiratory insufficiency. Diagnosing CPAM in adulthood is an exceedingly rare occurrence.
Case report: The case presents a 30-year-old non-smoking male, with severe atopic eczema treated with dupilumab and without any neonatal medical issues nor family history of pulmonary disorders. He presented at a tertiary hospital's Emergency Department following a low-velocity motor vehicle accident involving a two-wheeled vehicle, which resulted in a right chest injury. On admission, the patient reported thoracic pain, which responded to analgesic treatment. During the physical examination, the patient remained hemodynamically stable and without signs of respiratory distress. Initial chest and ribcage X-rays did not reveal any abnormalities and the patient was discharged with analgesic therapy. Four days later, he returned to the same Emergency Department due to a sudden pain aggravation, now sharp right-sided, particularly exacerbated by deep inspiration. The patient experienced no symptomatic relief despite analgesic therapy. To further investigate the persistent complaints, a contrast-enhanced chest computed tomography (CT) scan was performed. The CT scan revealed a hypovascular hyperlucent area measuring approximately 6 cm in the right lower lobe (RLL) suggestive of CPAM, without evidence of infection or other complications). Pulmonary embolism and other post-traumatic complications were also excluded. Following symptomatic control, the patient was discharged with a referral to the Pulmonology outpatient clinic for further evaluation, where he currently maintains follow-up. A multidisciplinary team specializing in thoracic tumors discussed the case, and a decision was made to conduct regular surveillance. After two years of follow-up, the patient remains asymptomatic. Radiologically, the lesion in the RLL displays stable dimensions and morphology. Whole-body plethysmography and alveolarcapillary diffusion studies were normal.
Discussion: This case highlights an incidental CPAM diagnosis in adulthood, in an individual previously asymptomatic for respiratory symptoms. Radiologically, CPAM may present as a cystic lesion or consolidation. Differential diagnoses may include bronchopulmonary sequestration, congenital diaphragmatic hernia, bronchogenic cyst, congenital lobar emphysema and pneumatoceles. Due to the association of CPAM with pulmonary neoplasms, such as bronchioloalveolar carcinoma and pleuropulmonary blastoma, it is important to maintain clinical and radiological surveillance in these patients. Other potential complications include recurrent infections, pneumothorax, and pulmonary hypoplasia, with subsequent risk of pulmonary hypertension. Management options include clinical and radiological surveillance or, in selected cases, pulmonary resection.

Keywords: *Congenital pulmonary airway malformation. Adulthood. Diagnosis.*

PE 043. PLEUROPARENCHYMAL FIBROELASTOSIS: THE CHALLENGES OF THE DIAGNOSIS AND THERAPEUTICS

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Introduction: Pleuroparenchymal fibroelastosis is classified as a rare form of idiopathic interstitial pneumonia. It is characterized by a combination of pleural fibrosis and fibroelastic changes, in the subpleural and upper lobe areas of the lungs. Its etiology and pathogenesis remain largely unknown. Some cases present with a progressive phenotype and evolve into severe forms, leading to lung volume loss and severe respiratory failure.
Case report: A 30-year-old man, originally from Ukraine, has been residing in Portugal since 2011. He is a former smoker (1.5 pack-years). His medical history includes bronchiectasis secondary to respiratory infections [bilateral pneumonia at the age of 13 and pulmonary tuberculosis (TB) at the age of 20]; recurrent respiratory infections and pectus excavatum. Seven months ago, he was diagnosed with advanced pleuroparenchymal fibroelastosis based on high-resolution CT imaging findings which revealed: "extensive fibrotic areas in both lung fields, multiple areas of apical predominant pleural thickening, cylindrical and varicose retractile bronchiectasis, tracheomegaly, dilatation of the main bronchi, and significant volume loss in both lung fields." His lung function showed severe restrictive syndrome (FEV1 26.4%, FVC 23.1%, FEV1/FVC 96.23, TLC 29.4%), leading to chronic global respiratory failure requiring ambulatory oxygen therapy at 3L/min. From the investigation, it is noteworthy: genetic testing for telomerase mutation, autoimmune studies, Aspergillus' precipitins, viral serologies and microbiological examination of bronchial secretions, which all yielded negative results. There is no family history of pulmonary fibrosis. The case was discussed in a multidisciplinary meeting in Interstitial Lung Diseases, where the diagnosis of pleuroparenchymal fibroelastosis was concluded, and antifibrotic therapy with nintedanib was proposed, along with a referral for a lung transplant consultation. Due to associated risks, a pulmonary biopsy was not performed. Over the past two months, the patient experienced three admissions due to spontaneous bilateral pneumothorax, which were managed conservatively without the need for drainage and with partial resolution. His chronic global respiratory failure has worsened, and the proposed treatment plan includes the nintedanib, respiratory rehabilitation, and follow-up in lung transplant consultations.
Discussion: This clinical case highlights the diagnostic and therapeutic challenges of pleuroparenchymal fibroelastosis, emphasizing the importance of a multidisciplinary approach. As there is currently no specific recognized treatment for this condition, lung transplantation remains the only viable option for progressive cases, despite potential technical complications due to pleural thickening. Immunosuppressive therapy has shown limited efficacy and is associated with the risk of infections. Antifibrotic therapy has been used in some isolated cases, but with inconclusive results so far. Although the underlying pathophysiological mechanism remains unclear, pleuroparenchymal fibroelastosis has been associated with mutations in the telomerase complex genes, bone marrow/lung transplantation, chemotherapy, autoimmune diseases, respiratory infections, chronic hypersensitivity pneumonitis, and environmental exposure to asbestos and aluminum. In the presented case, the history of recurrent respiratory infections and pulmonary tuberculosis may be linked to the development of this condition, warranting further studies to explore the potential role of respiratory infections as an eventual risk factor.

Keywords: *Pleuroparenchymal fibroelastosis. Nintedanib. Pneumothorax.*

PE 044. CYSTIC LUNG DISEASE: DIFFERENT PRESENTATIONS AND THE ROLE OF HISTOLOGY IN ETIOLOGICAL DIAGNOSIS ABOUT 2 CHALLENGING CLINICAL CASES.

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Introduction: Cystic lung diseases are a heterogeneous group of diseases who share the imaging finding of thin-walled lung cysts,

usually diffuse. In the diagnostic evaluation, a personal medical history detailed with reference to exposures and underlying systemic diseases is critical. High-resolution CT, bronchoalveolar lavage (BAL) and histology are useful for the diagnosis.
Case reports: Case report 1: A 49-year-old woman, non-smoker, without history of inhalation exposures, with a history of psoriatic arthritis in follow-up in consultation of autoimmune. For sustained joint complaints, despite ongoing therapy and considering biological therapy, she was screened for latent tuberculosis. The radiography of the thorax was altered, and chest CT scan was performed where a multicystic pattern was visible with architectural distortion and parenchymal destruction more in the upper lobes with cystic formations of various confluent dimensions. At this point the hypothesis of the diagnosis raised were Langerhans histiocytosis, malformation congenital airway or pulmonary involvement by underlying connectivitis. Performed complete analytical study without relevant changes, functional tests that showed severe obstruction and BAL with neutrophilic alveolitis, with no other findings. Given that the study was not enlightening, it was decided to proceed to lung biopsy. The biopsy showed "emphysema lesions and morphological aspects of hyperplasia of smooth muscle tissue, significant multifocal fibrosis with numerous associated multinucleated foreign body giant cells, in relation to crystals of cholesterol." Upon this result, even after review of the slides in another Center and discussion, In a multidisciplinary meeting, the diagnostic doubt is maintained. The patient started biological for connectivitis and remain under surveillance. Case report 2: A 22-year-old non-smoker admitted to the SU due to right thoracalgia with an X ray which showed an large volume right pneumothorax. Placed thoracic drain with complete expansion, visualizing on posterior radiography rounded areas hypertransparent. The chest CT scan performed showed "Structural alteration emphysematous of the right lower lobe with parenchymal rarefaction with emphysematous areas and air cysts. The segmental bronchus of the right lower lobe had an apparent reduction in its caliber." Upon this examination, the differential diagnosis was congenital airway malformation or Bronchial atresia. Bronchofibroscopy showed no endobronchial changes. Proposed for surgical resection, performed segmentectomy of S6. Histology showed "lung parenchyma with dilated bronchial structures containing mucus. On the wall of these structures, in the wall of the vessels and sometimes lining the cystic spaces is observed proliferation of elongated or ovoid cells without atypia. Despite the negativity for HMB45 the morphological aspects observed -cystic spaces with cell proliferation smooth muscle, areas of emphysema, and hemorrhage, associated with secondary bronchiectasis, areas of fibrosis and dystrophic calcification - are consistent with the diagnosis of lymphangioleiomyomatosis."
Discussion: Cystic lung disease is a heterogeneous disease, with different presentations and severities, and sometimes even after exhaustive study remains a diagnostic challenge. Histology can be helpful, but not always enlightening.

Keywords: *Cystic lung disease. Different presentations. Diagnosis.*

PE 045. ANTI-SYNTHETASE SYNDROME: PERSISTENCE AS KEY TO DIAGNOSIS

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Introduction: Anti-synthetase syndrome is a rare autoimmune disease defined by the presence of anti-aminoacyl-tRNA synthetase antibodies, that can manifest through inflammatory myopathy, polyarthritis, Raynaud's phenomenon and interstitial lung disease.
Case report: This case portrays a 42-year-old male patient, autonomous, working in construction, with a history of Dupuytren's contracture surgery in 2017. Former smoker (10 pack-years) and previous exposure to caged birds for 3 years. Admitted to the Internal Medicine department for study of dyspnea, asthenia, unspecified weight loss, inflammatory arthralgias, and swelling of proximal interphalangeal joints and knees with one month of evolution, without respiratory failure. Investigations during the hospitalization revealed diffuse bilateral subpleural fibrosis on thoraco-abdominopelvic CT scan, with ground-glass opacities, along with hepatosplenomegaly. Laboratory analysis showed microcytic anemia, iron level of 39 µg/dL, ferritin of 487 ng/mL, slightly elevated sedimentation rate, negative viral serologies, unremarkable protein electrophoresis and negative autoimmune study. Bronchoalveolar lavage (BAL) demonstrated intense lymphocytic alveolitis with a low CD4/CD8 ratio (0.23). The patient was discharged with a prescription for prednisolone 40mg/day and was referred for Pulmonology outpatient consultation. Significant clinical improvement was observed after starting corticosteroid therapy. Despite suspicion of connective tissue-associated interstitial lung disease, the diagnosis of chronic hypersensitivity pneumonitis was established due to negative autoimmune study and compatible imaging findings, BAL analysis and previous exposure. Attempts at gradual corticosteroid tapering resulted in worsened imaging findings and recurrence of joint complaints after one year, leading to initiation of azathioprine (initially 50 mg/day, escalated to 100 mg/day, which the patient could not tolerate). A new enlarged autoimmune study was requested due to ongoing joint symptoms, which revealed positivity for anti-synthetase-anti-PL7 antibody. Consequently, the diagnosis was revised to anti-synthetase syndrome with pulmonary involvement, and treatment with rituximab was initiated in collaboration with Rheumatology, resulting in clinical and imaging improvement.
Discussion: This case underscores the overall importance of persistent etiological investigation when clinical suspicion is high and emphasizes the significance of screening for anti-aminoacyl-tRNA synthetase antibodies in patients with a clinical profile consistent with interstitial lung disease and systemic involvement.

Keywords: *Interstitial lung disease. Anti-synthetase syndrome. Aminoacyl-TRNA synthetase.*

PE 046. A RARE CAUSE OF DIFFUSE PULMONARY NODULES

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Case report: The authors present the case of an 18-year-old female patient who was referred to a pulmonology consultation by the primary health care provider after undergoing a CT scan of the chest showing multiple bilateral micronodules with distribution in all lung lobes. As a personal history, she had tuberous sclerosis diagnosed 2 years earlier, Moebius syndrome diagnosed in childhood, moderate cognitive delay, epilepsy and dorsolumbar kyphoscoliosis. She denied recurrent pneumonia or contact with tuberculosis patients. Clinically, the patient reported only non-productive cough and denied dyspnea, wheezing, or other complaints. On physical examination, dorsolumbar kyphoscoliosis was evident, she was eupneic on room air with a peripheral saturation of 95%, pulmonary auscultation showed a global decrease in breath sounds and no adventitious sounds, she did not have digital clubbing. It also had analyzes with tumor markers that were all negative (AFP, CA 19.9, CYFRA21, NSE, ProGrp and Scc). Gasimetrically, she did not present respiratory failure. She repeated the CT scan of the chest, which showed multiple nodules, some in ground glass, distributed throughout all the lung lobes, with no change in dimensions when compared to the previous examination, and no associated cystic lesions, raising the hypothesis of multifocal micronodular hyperplasia of pneumocytes. Functional respiratory tests were not performed, given the impossibility of col-

laboration. The patient's case was discussed in a multidisciplinary meeting, and the definitive diagnosis of micronodular multifocal hyperplasia of pneumocytes was considered. Anti-pneumococcal vaccination was prescribed and he remains under surveillance. Multifocal micronodular pneumocytic hyperplasia may occur in two-thirds of patients with tuberous sclerosis, with or without associated lymphangioleiomyomatosis. The etiology appears to be due to hyperphosphorylation of rapamycin-related proteins that can cause benign proliferation of type II pneumocytes along the alveolar septa.

Keywords: *Pulmonary nodules. Tuberous sclerosis. Multifocal micronodular pneumocyte hyperplasia.*

PE 047. DESQUAMATIVE INTERSTITIAL PNEUMONIA – AN EXCEPTION TO THE RULE

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Hospital Prof. Doutor Fernando Fonseca.

Introduction: Desquamative interstitial pneumonia (DIP) was originally described by Liebow *et al.* in 1965. It is a rare form of idiopathic interstitial pneumonia (IIP) usually associated with tobacco exposure. It often has a good prognosis, in contrast to other IIPs, given its usual response to smoking cessation and corticosteroid treatment. However, in some cases the disease progresses despite immunosuppression and there is little information and evidence on possible therapeutic alternatives.
Case report: 53-year-old male, smoker (30 pack-years), with a history of chronic rhinosinusitis and asthma in childhood, referred to a respiratory medicine consultation due to IIP. He referred complaints of dry cough and dyspnea on exertion (mMRC 1) with months of evolution, sometimes associated with wheezing, without fever or constitutional symptoms. He denied relevant occupational or environmental exposures, other addictions or usual medication. On physical examination, crackles were evident in the upper third of both hemithorax on pulmonary auscultation and digital clubbing. The chest CT that led to the referral described diffuse interstitial densification associated with ground-glass opacification areas more pronounced in the anterior segments and slight honeycombing in inferior subpleural space. The respiratory functional evaluation showed a mild restrictive pattern (FVC 71%, TLC 72%) with a moderate decrease diffusion (DLCOc 59%), without blood gas changes at rest or significant desaturation on exertion. The transthoracic echocardiogram showed no alterations. Videobronchofibroscopy (BFO) was performed with bronchoalveolar lavage, whose cytological analysis showed mild neutrophilic (9%) and eosinophilic (4%) alveolitis. The serological study revealed only positivity for ANA (titer 1/320) and p-ANCA autoantibodies. To clarify the condition, he underwent surgical lung biopsy by VATS whose histopathological evaluation showed filling of the alveolar spaces by aggregates of macrophages with golden-brown cytoplastic pigment and emphysematous changes associated with focal interstitial fibrosis in subpleural topography. Given the described findings, DIP was assumed and after smoking cessation, systemic corticosteroid therapy was initiated, which led to a slight clinical and functional improvement. Due to persistence of symptoms and imaging changes despite corticosteroid therapy, it was decided to intensify immunosuppression with Azathioprine, which he did not tolerate due to liver toxicity. It was then decided to associate Clarithromycin, which allowed the progressive reduction of corticosteroid therapy, maintaining functional stability. At 4.5 years after the diagnosis, the patient presents a new clinical and imagiological deterioration, which resulted in an increase in the honeycomb alterations. A new immunosuppressive treatment with Mycophenolate Mofetil and the start of anti-fibrotic therapy with Nintedanib were proposed.
Discussion: Although DIP has been described for over 55 years, much remains to be discovered. In the reported case, the disease progressed despite smoking cessation, immunosuppressive and immunomodulatory treatment, demonstrating, as has already been recognized in the literature, the possibility of progression to progressive fibrotic disease (PFD). If on one hand, such an evolution confers a worse prognosis, on the other hand according to the latest guidelines it provides a new therapeutic approach: the antifibrotics. However, further studies are needed to better characterise this disease and define its treatment, particularly in cases that do not respond to corticosteroid therapy.

Keywords: *Desquamative interstitial pneumonia. Progressive pulmonary fibrosis. Immunosuppression. Antifibrotics.*

PE 048. OTORHINOLARYNGOLOGICAL SURGERY IN OSAS: EFFICACY (UN)EXPECTED?

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Introduction: Highly prevalent and with several known risk factors, Obstructive Sleep Apnea Syndrome (OSAS) is a major threat to global health, and its timely and assertive approach are imperative.
Case report: Man, 42 years old, autonomous, theater actor, referred to the consultation of Sleep Respiratory Pathology (SRP) by clinic, devalued by himself and with years of evolution, of snoring, apneas visualized by his wife, preferential mouth breathing and initial insomnia. Associated with perennial nasal obstruction and recurrent tonsillitis. Former smoker (12 UMA), referred as comorbidities: allergic rhinitis, dyslipidemia and hepatic steatosis. No usual medication. Of family background to highlight: brother with SRP. On objective examination, the patient was eupneic, without auscultatory alterations, but with excess weight (although regular practice of physical exercise and denial of food and/or alcohol excesses), amygdalin hypertrophy and dimensional increase of the uvula. Because of suspicion of SRP, requested: Pulmonary Function Tests (PFT) (normal), Polysomnography (PSG) – diagnostic of severe OSAS (AHI/RDI of 106/h) –, and Blood Gas (GSA), which aimed at daytime hypercapnia. A CT-SPN and pharynx were also performed, identifying a pronounced deviation of the nasal septum (with reduction of the amplitude of the nasal cavities), rhinitis alterations, hypertrophy of the sinus mucosa, slight asymmetry of the piriform sinuses and reduction of the airway caliber in the rhino-pharyngeal transition (with concentric thickening of the pharyngeal walls and hypertrophy of the palatine tonsils). Thus, was requested evaluation by Otorhinolaryngology (ORL) and the patient started AutoCPAP 6-16 cmH2O. Followed in consultation, with therapeutic compliance and normalization of AHI, in the subjective evaluation of the patient, the clinical benefits were scarce. Associatedly, in the various GSAs performed, he maintained daytime hypercapnia, so the study was extended with CT-Thoracic and Skull, Echocardiogram, analysis and repetition of PFR (all normal), as well as with therapeutic PSG – in which an activation rate of only 3-4% was found, so it was decided to replace AutoCPAP by NIV-BiPAP-ST (6-16, FR 14). With the introduction of NIV, gasometric and capnography normalization was achieved, but the patient persisted with low activation rates in the various controls. At the same time, she maintained frequent tonsillitis and the evaluation of ENT was favorable to surgical indication. Bilateral tonsillectomy and inferior turbinectomy, partial uvulectomy and endoscopic septoplasty were performed without intercurrences, in the postoperative follow-up, and increasing difficulty in tolerance to ventilatory pressures developed. Thus, 3 months after surgery, repeated PSG (without ventilation) and diagnosed only mild OSAS (AHI/RDI 11/h). In view of the clinical improvement of the patient and reassessment by capnography with normal PCO2 and SpO2 values, NIV was suspended and the

necessary sleep hygiene and healthy lifestyle measures (with reduction of excess weight) were reinforced.
Discussion: The clinical case is presented for its richness in including several factors contributing to OSAS (male gender, age, overweight, ENT pathology...) – highlighting the need for an integrated approach –, for the gasometric benefit obtained when introducing NIV and, above all, for the excellent response obtained with the surgical intervention of ORL.

Keywords: *OSAS. Hypercapnia. Low activation. NIV. Otorhinolaryngological surgery.*

PE 049. CAN THE EPWORTH SLEEPINESS SCALE PREDICT THE OCCURRENCE OF OBSTRUCTIVE SLEEP APNEA?

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Introduction: Epworth sleepiness scale (ESS) is widely used for the assessment of daytime sleepiness. Excessive daytime sleepiness is common in sleep disorders, including obstructive sleep apnea (OSA). Only a few studies tried to predict ESS' usefulness in diagnosing OSA. We intended to assess its usefulness in predicting the occurrence of OSA.
Methods: For 12 months, we enrolled participants with high pretest probability for OSA and a valid ESS questionnaire, who underwent a type III home sleep apnea testing (HSAT) (N = 121 participants). The HSATs were manually reviewed by a trained sleep technician. ESS and apnea-hypopnea index (AHI) were evaluated statistically using correlation analysis and dependent t-tests. Sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) of OSA identification by an ESS > 10 were calculated. The area under the receiver operating characteristic curve (AUROC) of ESS was also calculated.
Results: The mean age was 56.67 ± 13.60 years, 64.5% were male, and the mean BMI was 33.01 ± 6.52 kg/m2. 36 participants (24.0%) did not have OSA, 47 (31.3%) had mild OSA, 27 (18.0%) had moderate OSA, and 40 (26.7%) had severe OSA. Depression was present in 24% of the participants. The mean ESS was 10.18 ± 5.52. The mean ESS in men was 10.31 ± 5.40 and 9.95 ± 5.79 in women, without significant differences between groups (p = 0.357). When depression was present ESS was 10.31 ± 5.00 and when it was absent was 10.14 ± 5.70, without significant differences between groups (p = 0.495). At normal, mild, moderate, and severe OSA, ESS was 9.92 ± 5.16, 8.90 ± 5.20, 9.78 ± 4.80 and 12.03 ± 6.16, respectively. Despite a higher ESS in severe OSA, the ESS mean difference between the OSA severity groups was non-significant (p > 0.05). At ESS > 10 (55 participants), 27.3% had depression and the mean AHI manual scoring was 26.98 ± 25.28 events/hour. At ESS 10 (66 participants), 21.2% had depression and the mean AHI manual scoring was 20.14 ± 20.68 events/hour. However, the mean difference in AHI was non-significant (6.84 ± 4.18 events/hour; p = 0.056). The sensitivity, specificity, PPV, and NPV for OSA identification by an ESS > 10 were 45.3%, 53.8%, 78.2%, and 21.2%, respectively. The AUROC of ESS for OSA diagnosis was merely 0.51. There was a mild, positive, linear correlation between ESS and AHI manual scoring (r = 0.22; p = 0.016). This correlation remained significant (p = 0.014) despite introducing the "depression" variable, although the presence of depression negatively influenced AHI scoring (p = 0.078).
Conclusions: Our study shows that ESS was only marginally useful in predicting the occurrence of OSA, matching the results of other studies, and therefore it should not be used alone to screen patients for OSA. The presence of depression is important when evaluating ESS since excessive daytime sleepiness is frequent in these patients and the presence of depression negatively influenced AHI scoring.

Keywords: *Epworth. Apnea-hypopnea index. Obstructive sleep apnea. Excessive daytime sleepiness. Diagnosis.*

PE 050. OSAS BEYOND PAP THERAPY

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Introduction: Obstructive Sleep Apnoea Syndrome (OSAS) is highly prevalent respiratory disorder. The mandibular advancement device (MAD) allows the mandible to move forward to a more anterior position, achieving a better air passage into the upper airway; which has been shown to provide a positive response in the treatment of obstructive sleep apnoea and snoring. Bariatric surgery may be an option or the treatment of OSAS in patients with obesity, as may ENT surgery. Myofunctional therapy consists of correcting and oral cavity. dysfunctions of the orofacial structures, i.e. the entire face. The aim was to determine whether these therapies could correct or reduce the apnoea/hypopnoea index (AHI) in patients diagnosed with OSAS.
Methods: A retrospective evaluation was performed on patients followed in the Sleep Medicine clinic for OSAS between March 2019 and June 2023, in whom the initial therapeutic option for the treatment of obstructive sleep apnoea was not positive airway pressure (PAP) therapy. Patients with a mandibular advancement device were included, as well as patients who had undergone bariatric surgery, ENT surgery or myofunctional therapy.
Results: Nine patients were assessed, five men and four women, aged between 35 and 75 years, with a mean diagnostic AHI of 32.2/H (median 24.5), most of whom had positional OSAS. In June 2023, 4 patients were using MAD exclusively; 1 patient had only undergone ENT surgery; 1 patient had only undergone bariatric surgery and 3 patients had opted for more than one therapy, with 1 patient having MAD and undergoing myofunctional therapy; 1 patient had bariatric surgery and ENT surgery, 1 patient combined the use of MAD with weight loss. On average at diagnosis patients had: 22% mild OSAS; 33% moderate OSAS; 44% severe OSAS, who refused PAP therapy. After using the different therapies the patient group had: 44% AHI < 5/H, 44% AHI > 5/H and < 15/H, 11% AHI > 15/H and < 30/H, with 0% having an AHI > 30/H. Thus, patients who corrected or reduced the Apnoea/Hypopnoea Index with the use of MAD or other therapies were 78% and only 22% maintained the diagnostic AHI.
Conclusions: In patients with a confirmed diagnosis of moderate OSAS, alternative treatments to PAP therapy, when correctly indicated, have been shown to correct or decrease the diagnosed AHI without the need for PAP therapy.

Keywords: *OSAS. Therapies. AMD. Alternative therapies.*

PE 051. HOW TO ADDRESS UNDERDIAGNOSIS OF OBSTRUCTIVE SLEEP APNEA – PILOT PROJECT WITH PRIMARY HEALTH CARE

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Introduction: Obstructive sleep apnea (OSA) is a prevalent, underdiagnosed condition and the most frequent cause of referral to a sleep disorder consultation. It is associated with cardiovascular disease and increased risk of accidents (occupational and traffic). Given the higher prevalence of obesity and the need for specific

resources for the diagnosis of OSA, the response of hospital services has been insufficient, which limits the access of patients with more severe disorders to this consultation. For example, at ULSM the average waiting time for a sleep disorders consultation was over 12 months. To improve the diagnostic response, our Pulmonology service implemented a pilot project of shared management of OSA with primary health care (PHC). Objective: To describe the implementation of the pilot project and to characterize patients with suspected OSA referred by PHC for cardiorespiratory polygraphy (CRP) in the outpatient setting.
Methods: In the presence of a high clinical suspicion (STOP-BANG3), the doctor of general and family medicine (GFM) requested a CRP. This was performed by a cardiopneumology technician in the PHC using NOX3 equipment, and automatic analysis was performed based on published validations for this equipment. In doubtful cases or if apnea-hypopnea index (AHI) < 15, the study was reviewed manually. In case of AHI15, the patient was referred to a hospital consultation, implemented for clinical evaluation, therapeutic guidance and with predefined follow-up. The remainder (AHI < 15) received an information leaflet with sleep hygiene measures and were managed by GFM. PCR data from all patients referred by PHC were analyzed.
Results: From April to July 2023, 152 patients underwent CRP [56(36.8%) women; mean age = 54.9 ± 13.3 years]. Mean AHI was 25.3 ± 23.1/h and OSA was excluded in 23(15.1%) patients. Regarding severity, 40 (26.3%) patients had mild OSA, 42 (27.6%) moderate and 47 (30.9%) severe. When comparing patients with AHI < 15 and those with AHI15, BMI was significantly higher in those with higher AHI (AHI15 = 31.8 ± 5.1 vs AHI < 15 = 28.4 ± 5.4; p < 0.001). Oxygen desaturation index and time with SpO2 below 90% were significantly higher in those with AHI15, and they had lower mean and minimum SpO2 (p < 0.001). The positional component of OSA was not associated with AHI severity (p = 0.200). Concerning the clinic, there were no significant differences between the groups in daytime sleepiness, assessed by the Epworth sleepiness scale (AHI15 = 10.4 ± 6.3 vs AHI < 15 = 9.2 ± 4.9; p = 0.199), unlike snoring, assessed by the percentage of snoring (AHI15 = 38.4 ± 19.1 vs AHI < 15 20.2 ± 17.6, p < 0.001).
Conclusions: In our sample we found a distribution of OSA severity and an association with BMI in accordance with the literature. As for symptoms, snoring was more frequent in the more severe forms, but daytime sleepiness did not differ significantly between the different degrees of severity. Although this project is at an early stage, the possibility of performing PCR in PHC seems to speed up the diagnosis of OSA, which will hopefully translate into a reduction in the waiting list for consultation and earlier initiation of treatment, especially in the most severe cases.

Keywords: *Obstructive sleep apnea. Primary health care. Cardiorespiratory polygraphy.*

PE 052. GLAUCOMA AND ITS ASSOCIATION WITH OBSTRUCTIVE SLEEP APNEA: TWO CASE REPORTS

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Introduction: Glaucoma, a common and serious progressive disease of the optic nerve has been associated with Obstructive Sleep Apnea (OSA) in recent years. The authors present two case reports of patients with normal tension glaucoma (NTG) sent for OSA evaluation due to their aggressive progression despite considerable intraocular pressure reduction and unremarkable systemic workup.
Case reports: The first case is a 78-year-old ex-smoker man with previous history of arterial hypertension (AH) and dyslipidemia. After being diagnosed with rapidly progressing NTG, he underwent carotid and transcranial doppler and cerebral MRI, which were normal, and 24-hour ambulatory blood pressure monitoring which revealed a good blood pressure control. After normal cardiovascular studies, the patient was referred to the sleep respiratory pathology appointment. He underwent polysomnography, revealing a moderate OSA with an apnea-hypopnea index of 23.6/h. The patient started on positive pressure therapy. The second case is a 77-year-old woman with previous history of AH, diabetes mellitus type 2, obesity and ischemic stroke in 2015. After a diagnosis of rapidly progressing NTG, she presented a normal carotid and transcranial doppler and cerebral MRI. She was then referred to a respiratory pathology appointment. Even though the patient was asymptomatic, she underwent polysomnography, revealing a moderate OSA with an overall apnea-hypopnea index of 15.6/h.
Discussion: The authors' goal is to raise awareness about the need to consider OSA in patients with glaucoma who continue to experience progression despite significant intraocular pressure reduction as it is common and treatable, and may positively impact glaucoma control.

Keywords: *Glaucoma. OSA.*

PE 053. THE ROLE OF OBSTRUCTIVE SLEEP APNEA IN CANCER: A CROSS-SECTIONAL STUDY

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Introduction: Obstructive sleep apnea (OSA) is common and linked to poor health outcomes. A key modulator of OSA is nocturnal intermittent hypoxemia, which was found to affect cell metabolism, inflammation and immune response. Likewise, hypoxia has been recognized as a hallmark of cancer, due to its effect on gene expression and metabolism. However, despite striking epidemiological evidence of higher cancer rates and mortality, the association between OSA and cancer in observational studies remains inconclusive.
Methods: To investigate preferential locations of cancer in OSA patients and its progression, we conducted a cross-sectional study of a retrospective combined cohort of 10-year data on patients with OSA and cancer followed-up in the sleep and noninvasive ventilation unit in a tertiary hospital.
Results: We included 415 patients, of which 267 (64.3%) were males with a mean age of 70 ± 10.6 years. Of all patients, 365 (88%) were overweight, 243 (58.6%) were smokers or previous smokers and 115 (27.7%) had history of alcohol abuse. Concerning OSA diagnosis, the mean age at diagnosis was 63 ± 10.61 years old, the mean Epworth Sleep Scale score at diagnosis was 9.6 ± 5.43, the mean apnea-hypopnea index (AHI) was 26.6 ± 25.6, with a mean oxygen desaturation index (ODI) of 25.5 ± 26.3. Thirty-three percent of patients met the criteria for nocturnal hypoxemia. Overall, 103 (24.8%) patients had mild OSA, 129 (31.1%) moderate OSA and 183 (44.1%) severe OSA. Of all patients, 309 (74.5%) were initially treated with positive airway pressure therapy. During the follow-up period, 243 (78.7%) showed and adherence greater than 70%, 35 (11.3%) adhered below 70% and 31 patients (10%) stopped treatment for intolerance. OSA was the first diagnosis in 229 (55.2%) patients and the median time until cancer development was 57 ± 51.1 months. Regarding cancer diagnosis, the most frequent primary malignancy sites were lung, breast and colorectal cancer, with a prevalence of 123 (29.6%), 71 (17.1%) and 66 (15.9%), respectively, 86 (20.7%) of which presented with metastatic disease at diagnosis. During follow up, 155 (37.3%) showed disease progression. The mean overall disease-free survival was 61.4 ± 58.5 months.
Conclusions: This cross-sectional study showed that lung, breast and colorectal were the most prevalent cancer locations in OSA patients and its diagnosis was stablished, on average, 57 months after OSA, which focus the role of nocturnal intermittent hypoxia

as a key modulator in both diseases and underscores the need for further investigation to elucidate the complex interplay between these two conditions and particularly the impact on health outcomes.

Keywords: *OSA. Cancer. Intermittent hypoxemia.*

PE 054. SEVERE SLEEP APNEA-HYPOPNEA SYNDROME. WHAT ARE THE ODDS?

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Introduction: Sleep Apnea-Hypopnea Syndrome (SAHS) represents a significant part of the activity of the Pulmonology service given its high prevalence. Currently, the gold-standard for diagnosis is level I polysomnography (PSG). When video monitoring is not necessary, more accessible methods are preferred and widely used, such as level III PSG. The aim of this study was to identify the risk factors associated with severe SAHS in patients who underwent level III PSG.
Methods: Retrospective observational study of 713 patients referred to the Laboratório de Estudos do Sono, Centro Hospitalar do Médio Tejo (CHMT) between January and December 2022 for level III PSG. Data was collected through the database of the Laboratório de Estudos do Sono, CHMT. Patients under 18 years of age, with inconclusive examinations or with no Epworth Sleepiness Scale (ESS) record were excluded from the analysis. The predictive value of sex, age, BMI or ESS in severe SAHS (apnea-hypopnea index, AHI30) was assessed using binary logistic regression. Statistical analyses were performed in SPSS version 28.
Results: The analysis included 669 patients: 31.5% with severe SAHS; 60.7% male; mean age 60.3 ± 12.60 years; body mass index (BMI) 31.3 ± 5.33 kg/m^2; ESS 7.1 ± 5.44; AHI 26.9 ± 21.22 respiratory events/hour of sleep. Sex, BMI, age and ESS score are statistically significant predictors of severe SAHS, and explain 17.5% (Nagelkerke R2) of the variability. This model correctly classified 72.3% of cases. Males are about 2.4 times more likely to have severe SAHS than females (odds ratio, OR = 2.38; 95%CI [1.62;3.50]). Per kg/m^2 of BMI, the odds of having severe SAHS increase on average 1.14 times (95%CI [1.10;1.19]). Severe SAHS is associated with higher ESS scores (OR = 1.05; 95%CI [1.02;1.09]) and increasing age (OR = 1.04; 95%CI [1.02;1.06]).
Conclusions: This study shows that gender, BMI, age and ESS are factors associated with a higher probability of having severe SAHS, assessed by level III polysomnography, reflecting its importance in clinical practice. Level III PSG may be particularly appropriate for male patients with higher BMI.

Keywords: *Severe sleep apnea-hypopnea syndrome. Level III polysomnography.*

PE 055. CHYLOTHORAX IN RECURRENT COLORECTAL CANCER IN A PATIENT WITH FOLLICULAR LYMPHOMA

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Introduction: Chylothorax is a rare condition. Initially, its most frequent cause was non traumatic, corresponding to about two thirds of the cases. However, currently the traumatic etiology, mainly the post-surgical one, represents more than 50% of the cases described in the literature. Neoplasia is the most common non traumatic cause, with hematological neoplasms being the most frequent, more rarely it may originate from metastases. A representative rare case is presented.
Case report: Male, 82 years old, partially dependent on activities of daily living, with a history of sigmoid adenocarcinoma in 2017, who underwent Hartmann operation and adjuvant chemotherapy with posterior intestinal reconstruction, is currently being followed up at the hemato-oncology consultation for follicular lymphoma, undergoing chemotherapy (completed the fourth cycle), was referred to Pulmonology consultation for bilateral pleural effusion after hospitalization for SARS-CoV-2 infection with bacterial superinfection. A diagnostic thoracocentesis was performed, with output of milky pleural fluid, with characteristics of exudate, triglycerides > 1,100.0 mg/dL, cholesterol 275.41 mg/dL, with a total of 503 × 10^6/L nucleated cells, 26% of which were lymphocytes and 70% of other cells, negative cytology for neoplastic cells, compatible with chylothorax. Given the patient's history, the main diagnostic hypothesis was the progression of the hematologic malignancy. However, there had been a good analytical response to the chemotherapy cycles, so the study was continued, namely thoracoabdominopelvic computed tomography, which showed a slight increase in some of the parenchymal nodules in both lung fields, without evident nodular formations "de novo", stable pleural effusion on the left, disappearance of the pleural effusion on the right, and overlapping abdominopelvic adenopathic sleeve. Transthoracic biopsy of a peripheral nodular lesion in the right lower lobe was performed, the result of which revealed infiltration by adenocarcinoma with an enteric phenotype. The patient was referred to a Medical Oncology consultation and proposed to initiate palliative cytostatic treatment.
Discussion: This is a case that mirrors a rare situation of a chylothorax which, in addition to occur in an individual with active hematologic neoplasia and which is the most frequent cause of non-traumatic chylothorax, is associated with a context of recurrent colorectal adenocarcinoma, whose site of metastasis may be the lung. This demonstrates that the various diagnostic hypotheses should be considered even though, at first glance, there is a plausible and even more probable cause for the condition presented.

Keywords: *Chylothorax. Lymphoma. Colorectal cancer.*

PE 056. NONTRAUMATIC BILATERAL CHYLOTHORAX: A CASE REPORT

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Introduction: Chylothorax is a type of exudative pleural effusion, characterized by the presence of chyle in the pleural space. According to the literature, it is not completely clear which is the most prevalent cause for chylothorax, especially when bilateral. Still, a significant portion of the reported cases are unilateral and non-traumatic, with malignancy as the underlying cause. However, reaching the underlying diagnosis particularly in the absence of thoracic trauma, can be challenging, estimating that about 10% are idiopathic.
Case report: We report a case of a 66-year-old female, referred to the emergency department by her attending physician for a 1-week progressing dyspnea, associated with a 2-month old constitutional syndrome of unquantified weight loss and anorexia. After detecting a bilateral pleural effusion on chest x-ray, the patient was admitted for further study. After diagnostic thoracentesis, the pleural fluid analysis confirmed the presence of an exudate with characteristics compatible with chylothorax and whose pathological anatomy did not confirm the presence of neoplastic cells. On contrast-enhanced computed tomography, multiple mediastinal, lumbo-aortic and retrocrural adenopathies and mesenteric panniculitis were detected. In collaboration with colleagues from the Pulmonology and General

Surgery departments, we deliberated on the best approach for obtaining lymph node material for anatomopathological study, immunophenotyping and search for Koch's bacillus, in order to exclude ganglionic tuberculosis. Using a laparoscopic mesenteric lymph node biopsy and through evaluation by immunophenotyping, we were able to confirm the presence of a follicular lymphoma stage III B.
Discussion: The main aim with this case report was to draw attention to the difficulty that may arise from trying to find the underlying cause of a chylothorax, especially in cases of bilateral presentation and in the absence of thoracic trauma. Although this clinical case is in line with the literature, with neoplasia as the final diagnosis, it is worth remembering that even within this category, the pathology can be very diverse.

***Keywords**: Chylothorax. Follicular lymphoma. Pleural effusion.*

PE 057. EMPYEMA AS CLINICAL PRESENTATION OF EXTRATHORACIC PATHOLOGY

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Introduction: Empyema can be the starting point of the diagnosis of several pathologies, many of which are not directly related to the respiratory system.
Case report: 81-year-old man, former smoker (20 packs/year), with history of pancreatic cysts being followed up in a private clinic. Medicated with pancreatin, midazolam, trazodone, esomeprazole and betahistine, which he complied irregularly. Partially dependent. He went to the emergency department on 14/05/2023 due to progressive weakness and anorexia and weight loss (not quantified) for 2 months. In the last 2 days associated with left quadrants abdominal pain and constipation. He denied fever, cough or sputum. On physical examination, conscious and oriented, emaciated. BP 92/61mmHg, HR – 90 bpm, eupneic with SpO2 97% at room air. PA with abolished murmur on the left. Painful abdomen on palpation, without apparent masses. No peripheral edema. Chest radiography in dorsal decubitus showed hypotransparency in the entire left hemithorax, abdomen radiography with tangential rays without air-fluid levels. Analytically, Hg 7.1 g/L, no leukocytosis, neutrophilia 8,000, RCP 173 mg/dL, creatinine 1.5 mg/dL and BUN 50. He underwent ultrasound-guided diagnostic thoracocentesis draining 100 ml of purulent liquid with fetid smell, subsequent insertion of a chest drain on the left, which was functional with pus output. He was admitted to the Pulmonology department with diagnosis of left empyema, constitutional syndrome of probable infectious cause and constipation. After collecting blood cultures, started antibiotic therapy with ceftriaxone and clindamycin. The post thoracentesis radiographic control showed an image suggesting pneumoperitoneum. Thoraco-abdomino-pelvic CT revealed, "...a small amount of gas and liquid in the left pleural space (...) lung without suspicious nodular images or consolidations (...) moderate-volume pneumoperitoneum (...) heterogeneous splenomegaly resulting from an abscess (...) large retroperitoneal expansive cyst in continuity with several structures, raising as main diagnostic hypothesis a mucinous tumor of pancreas tail (probably malignant IPMN), with fistulization into the stomach sites and invasion/fistulization into the descending colon/splenic angle of the colon. Patient remained hospitalized in the Pulmonology department, given that Surgery and Anesthesia considered that he did not meet criteria for a surgical approach, as well as the interventional Radiology for a percutaneous approach to the splenic abscess. Started follow-up by Palliative Care. On the 9th day of hospitalar internment, *Streptococcus anginosus* was isolated in the pleural fluid. Despite maintenance of antibiotic therapy, the patient's general condition kept to deteriorate and he died in the following day.
Discussion: The existence of a pleural effusion does not necessarily determine the existence of chest pathology. Some neoplasms, particularly in pancreas, expand locally and may fistulize into adjacent structures, favoring infectious complications.

***Keywords**: Pleural effusion. Empyema. Pneumoperitoneum.*

PE 058. KIDNEY STONES AND EMPYEMA? A COMBINATION HARD TO FIND

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Introduction: Pleural empyema usually results from an underlying pneumological pathology, with extrapulmonary causes being rare.
Case report: A 56-year-old woman, former smoker (20 packs/year), with known diagnoses of asthma, chronic obstructive pulmonary disease and depressive syndrome, went to the emergency department complaining of fever and left back pain, worsening on deep inspiration with 2 weeks of evolution, without improvement with oral analgesia. She denied dyspnea, worsening of her usual coughing pattern, or sputum. On admission, the patient was hemodynamically stable, SpO2 96% without oxygen therapy, with no signs of respiratory distress. On pulmonary auscultation, there was a decrease in vesicular murmur in the lower third of the left hemithorax. She also had renal murphy present on the left. Her blood gas analysis did not have alterations, analytical evaluation showed elevation of inflammatory parameters (leukocytosis, CRP 23.9 mg/dL), without alterations in renal function and without alterations in the summary urine test. She underwent a chest X-ray which confirmed the presence of hypotransparency in the lower half of the left lung field, suggestive of loculated pleural effusion. In this context, a probable empyema was assumed, and Pulmonology was contacted with the indication for possible drainage. Due to the absence of previous infectious respiratory symptoms, a thoracic CT was performed, which revealed the presence of left pleural effusion, also emphasizing the globoidity of the left kidney, extending to the abdominal CT, where obstructive calculi were identified in the kidney and ureter, with multiple peri, pararenal and left psoas muscle infectious collections. Acute obstructive lithiasic pyelonephritis on the left was assumed, and antibiotic therapy with ceftriaxone was started. She was referred to Urology and subsequently underwent placement of a left ureteral catheter and perirenal collection drainage with bacteriological isolation of *Proteus mirabillis*. After the urological procedure, she presented respiratory failure with an increase in pleural effusion and elevation of inflammatory parameters and underwent thoracentesis on the 8th postoperative day. There were no pleural, serum or urinary microbiological isolations. The patient showed progressive improvement, with thoracic imaging resolution in the reassessment at 8 weeks, maintaining follow-up in Urology.
Discussion: In the case presented, the patient had no significant pneumological complaints or suspected respiratory infection justifying the pleural effusion, and the imaging study was extended to the abdominal region with identification of the urological cause and targeted treatment. Empyema as a complication of urological infection is rare and its mechanism is poorly known, and may be associated with transdiaphragmatic migration of infected abdominal fluid or congenital or acquired defects of the diaphragm. Empyema secondary to abdominal infections represents a diagnostic challenge given that patients may have a nonspecific clinical presentation and confounding factors, such as the presence of previous pulmonary pathology.

***Keywords**: Empyema. Kidney abscess. Kidney lithiasis. Thoracentesis.*

PE 059. PNEUMOTHORAX AS A RARE COMPLICATION OF PULMONARY THROMBOEMBOLISM

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CHTS.

Introduction: Despite the high prevalence of thromboembolic disease (with studies reporting an annual incidence of approximately 0.5 to 1 per 1,000 inhabitants), its presentation in the form of a pneumothorax is rare. The underlying physiological mechanism appears to be related to direct alveolar rupture and subsequent air leakage into the pleural space, with the possibility of rapid progression to tension pneumothorax, a pneumological emergency.
Case report: A 41-year-old non-smoking woman with a history of peripheral venous insufficiency, no known respiratory diseases, and taking oral contraceptives. She presented to the emergency department with a 4-day history of fatigue on moderate exertion, accompanied by non-productive cough, denying any other symptoms. On examination, she was hemodynamically stable, tachypnoeic, with decreased breath sounds throughout the right hemithorax, no peripheral edema or signs of poor perfusion, bilateral varicose veins in the lower limbs, and an erythematous region on the anteromedial aspect of the left thigh, tender to touch. Gasometrical analysis revealed hypoxemic respiratory failure. Chest X-ray showed a large right-sided pneumothorax with no other pleuroparenchymal changes. Partial blood analysis showed no increase in inflammatory parameters or coagulation abnormalities. A chest CT scan was performed, revealing a large free distribution right-sided pneumothorax, causing significant atelectasis of the lung parenchyma and contralateral mediastinal shift, as well as a small right-sided pleural effusion. Thoracic drainage was performed. Subsequently, on completing the blood analysis, she had an elevated D-dimer level of 1,397. Due to this finding, along with complaints in the left lower limb (LLL), a Chest Angio-CT was performed, showing pulmonary embolism at the level of the right pulmonary artery bifurcation, extending into the proximal portion of the right upper lobar artery and the right lower lobar artery and its subsegmental branches, where it was almost occlusive, as well as a small non-occlusive thrombus in the left lower lobar artery. An echo-doppler of the lower limbs revealed signs of recent occlusive venous thrombosis at the level of the popliteal vein, the venous tibiofibular trunk, and the peroneal veins of the LLL. There were also signs of recent superficial venous thrombosis in a short varicose vein segment present in the left thigh. She started anticoagulation with low molecular weight heparin and showed a favorable evolution. Complete lung expansion was achieved with thoracic drainage and aspiration. At the time of discharge, she was prescribed home anticoagulation with warfarin.
Discussion: Although pulmonary embolism is a rare secondary cause of pneumothorax, it should be considered when studying the etiology of a pneumothorax, particularly in patients with risk factors for the development of this disease.

Keywords: *Pulmonary thromboembolism. Pneumothorax. Dyspnoea.*

PE 060. PNEUMOMEDIASTINUM, MARIJUANA AND PNEUMORRACHIS

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CHTS.

Introduction: We present a case of pneumorrhachis, a very rare condition that refers to the presence of gas in the spinal cord, described in the literature as a possible rare complication of pneumomediastinum and smoked marijuana consumption.
Case report: An 18-year-old man, with an active smoking habit of 10 cigarettes per day and regular use of smoked hashish, with a history of suspected untreated asthma. He sought the emergency department due to dyspnoea that had been evolving for several days. There was no history of chest trauma. He had audible wheezing, scattered wheezing, prolonged expiratory time, and palpable subcutaneous emphysema bilaterally in the lateral cervical area. Afebrile and hemodynamically stable. Gasometrical analysis showed hypoxemic respiratory failure. Blood tests revealed an elevation in inflammatory parameters. Respiratory virus screening was negative. A chest X-ray showed pneumomediastinum and subcutaneous emphysema. He was started on oxygen therapy with a high-flow mask. A chest CT scan showed extensive emphysema in all neck spaces, diffuse pneumomediastinum, and also signs of extensive emphysema in the intermuscular and subcutaneous planes along the cervical region and thoracic wall. Notably, there was gas within the spinal canal involving the spinal cord-pneumorrhachis. There was no pleural effusion or pneumothorax. He was admitted to the Intensive Care Unit, where he received bronchodilator therapy and the possibility of reducing supplemental oxygen therapy. He was later transferred to the pneumology department, where he continued bronchodilator therapy, and his respiratory dysfunction resolved without the need for supplemental oxygen therapy. A cervical-thoracic and spinal CT scan was performed on the 5th day of hospitalization, showing resolution of the previous imaging findings - no evidence of gas in the spinal canal, subcutaneous emphysema, or pneumomediastinum. At the time of discharge, he had no respiratory symptoms and was saturating at 99% on room air. He was revaluated in an outpatient clinic 2 months later, without complying with the prescribed bronchodilator therapy, reporting the absence of symptoms. He continues to smoke.
Discussion: Pneumorrhachis is a rare condition that can occur traumatically or non-traumatically. Among the non-traumatic causes, it can occur in the context of pneumomediastinum or inhaled marijuana consumption, among others. Although often benign and self-resolving, it can lead to complications such as increased intracranial pressure and intra-spinal hypertension. It should be considered in the etiological study of these patients.

Keywords: *Pneumorrachis. Pneumomediastinum. Young. Marijuana. Emphysema. Subcutaneous.*

PE 061. A CASE OF PLEURO-PERITONEAL LEAKAGE

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Introduction: The incidence of pleural effusion in dialysis patients can be as high as 80%. The most common causes are hypervolemia, parapneumonic effusion and uremic pleuritis. However, in patients on peritoneal dialysis who develop low ultra-filtration and pleural effusion, the presence of a pleuro-peritoneal leak should be considered. This is a rare complication of peritoneal dialysis approximately 2%. It is usually manifested by sudden dyspnea, cough and pleuritic-type chest pain. There are multiple explanations for this phenomenon, however it is well established that polycystic kidney disease is a risk factor due to increased intra-abdominal pressure and patients with previous episodes of peritonitis. The effusions are more frequently on the right. Therefore, as this is a rare complication of peritoneal dialysis, the authors consider it important to present this case to raise awareness of the existence of this entity.
Case report: This is a 76-year-old female patient with a known history of chronic kidney disease in the probable context of cardiorenal syndrome, permanent atrial fibrillation, heart failure with reduced ejection fraction, group 2 pulmonary hypertension, post-hysterectomy status due to neoplasia and hypothyroidism, admitted

to the nephrology department for cardio-renal syndrome. In this context, the patient has an indication for dialysis, so peritoneal dialysis is initiated. It was found that after infusion of 1,500 ml of dialyzing fluid, only 700 ml were drained. Ten hours after starting dialysis, he began to present with sudden dyspnea, polypnea and desaturation. Bronchodilator therapy, hydrocortisone 200 mg and furosemide 80 mg intravenously and supplementary oxygen were administered, but without reversal of the condition. Paracentesis was also performed with 500 ml of effluent. Due to persistent volume overload without response to diuretic therapy, a jugular dialysis catheter was placed and hemodialysis was performed. The chest X-ray of the venous catheter control showed the presence of a right pleural effusion. In this context, collaboration was requested from Pulmonology to perform evacuative thoracentesis. An echo-guided thoracentesis was performed in the 5th right intercostal space, midaxillary line, which was uneventful and 1,500 ml were drained. On macroscopic observation, the fluid was translucent and yellow in color. Gasimetry of the pleural fluid revealed a pH of 7.429 and biochemical examination of the pleural fluid was suggestive of a transudate with a creatinine level of 5.14 mg/dL. Given a biochemical test highly suggestive of peritoneal dialysis fluid and clinical and radiological improvement after evacuative thoracentesis, pleuro-peritoneal leak was assumed. This dialysis technique was discontinued and there was no recurrence of the pleural effusion.
Discussion: Despite being a rare cause of pleural effusion, pleuroperitoneal leak should be considered in patients on peritoneal dialysis. Early diagnosis should therefore be made, as maintenance of this dialysis technique would perpetuate the pleural effusion.

Keywords: *Dialysis. Peritoneal. Leak. Effusion. Pleural.*

PE 062. WHEN DYSPNEIA HAS A BAD OUTCOME

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Introduction: Mesothelioma is a rare and aggressive neoplasm that develops in mesothelial cells after asbestos exposure. Workers in the textile industry, construction, welders, miners or mechanics are some of the professions at higher risk. There are several types of mesothelioma, including pleural and peritoneal (the most common), as well as pericardial and testicular. Symptoms may appear only 10 to 50 years after exposure and can easily be mistaken with less severe pathologies, as they are often nonspecific. Survival rates range between 18 and 31 months with treatments such as chemotherapy, which can improve the quality of life.
Case report: The authors present the case of an 83-year-old man, retired mechanic, and smoker with a smoking history of 30 pack years. He had a personal history of dyslipidemia and benign prostatic hyperplasia but no known pulmonary history. He was referred to the pulmonology consultation due to a 2-month history of progressive dyspnea, fatigue, and a weight loss of 10 kg in the previous month. Chest X-ray showed left-sided hypotransparency. Chest CT revealed an "extensive solid proliferative lesion in the left pleura, with slight atelectasis of the left lower lobe and moderate left pleural effusion." There was no evidence of respiratory insufficiency in the blood gas analysis. Staging exams were requested, including cranial brain CT, which demonstrated "mild cerebrovascular small-vessel disease. No expansive lesions or abnormal contrast uptake suggestive of intra or extra-axial metastasis were identified. Atheromatous wall calcifications were observed in the carotid siphons, and slight dilation of the supratentorial ventricular system, consistent with involutional changes." PET-CT showed "anomalous pattern in the left pleura, suggesting mesothelioma, to be confirmed histologically. Metabolically active signal in the left adrenal gland and left cervical lymph node, favoring metastatic involvement." Laboratory analysis showed elevated beta2-microglobulin and CA levels. A transthoracic biopsy confirmed the diagnosis of epithelioid mesothelioma. Therefore, the patient was diagnosed with stage IV Mesothelioma (with metastasis in the left adrenal gland and left cervical lymph node) and was referred to the Oncology Pulmonology consultation. Unfortunately, the patient passed away after completing four cycles of chemotherapy.
Discussion: This clinical case stands out as a rare manifestation of malignancy, as mesothelioma accounts for only 0.3% of neoplasms. The symptomatic manifestation of mesothelioma can be easily confused with less severe respiratory pathologies, emphasizing the importance of Pulmonology in the correct differential diagnosis. Obtaining a thorough clinical history, especially investigating occupational exposure, allows for earlier suspicion and confirmation of diagnosis, potentially improving the patient's prognosis.

Keywords: *Neoplasia. Mesothelioma. Staging. Dyspnea.*

PE 063. WHEN PLEURAL EFFUSION IS THE FIRST DIAGNOSTIC CLUE...

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Introduction: Pleural effusions can result from multiple pleuropulmonary or systemic disorders, of benign and malignant etiologies. Although the most frequent cause is the presence of fluid overload as a result of heart, liver or kidney disease, the rarest causes cannot be neglected, such as autoimmune pathologies (for example systemic lupus erythematosus or rheumatoid arthritis), hypothyroidism or even in the context of occupational or drug exposure. Making a prompt diagnosis is important so that it is possible to institute adequate therapy that allows resolving the condition and so that serious conditions, such as neoplasms and tuberculosis, are not neglected.
Case report: 85-year-old male, autonomous in activities of daily living, residing in Lisbon. As personal antecedents, chronic obstructive pulmonary disease stands out GOLD E, whose last exacerbation would have occurred 1 year before, pleuropulmonary tuberculosis at the age of 18 submitted to collapse therapy in the left lung, arterial hypertension, dyslipidemia and benign prostatic hyperplasia. He went to the Emergency Department due to dyspnea, tiredness on minimal exertion and cough with whitish sputum in the previous 7 days, having denied other systemic symptoms. The objective examination only highlighted the abolition of vesicular murmur in the left base with a decrease in vocal vibrations and dullness to percussion in that location. Analytically, on admission, with increased inflammatory parameters, with neutrophilic leukocytosis and CRP of 8.5 mg/dL, without elevation of NT-proBNP or troponin T. A chest X-ray showed bilaterally diffuse reticulo-interstitial infiltrate and left pleural effusion, as a result of which performed chest CT for better clarification, which confirmed pleural effusion, also demonstrating the presence of infected bronchiectasis in both bases, with calcified pleural plaques and pericardial effusion with poor definition of pericardial fat. He started levofloxacin empirically after blood cultures and sputum cultures were negative. The transthoracic echocardiogram showed circumferential pericardial effusion predominantly anterior to the right ventricle, with fibrin, without hemodynamic compromise. In the absence of a safety window for draining the pleural effusion, an etiological study was started, including a complete panel with the investigation of infectious causes, an autoimmune study and a study of active tuberculosis, among which an increase in SV, presence of rheumatoid factor and positivity for Ac anti-cyclic citrullinated peptide, without other alterations. From the review of the anamnesis, the presence of arthralgias with a long-standing inflammatory rhythm, which the patient undervalued, without relevant radiographic alterations, was

verified. After excluding other possible etiologies, particularly neoplastic ones, polyserositis was assumed in the context of rheumatoid arthritis (RA), and therapy with hydroxychloroquine and prednisolone was started, with resolution of pleural and pericardial effusions.
Discussion: Pleural disease is common in patients with RA, but it is usually subclinical. Pleural disease is more common in long-term RA but may precede joint disease. In addition, it is more common in men and may coexist with rheumatoid nodules and interstitial lung disease in up to 30% of cases. Although it is not one of the frequent causes of pleural effusion in the elderly, this case shows the importance of taking it into account.

Keywords: *Pleural effusion. Polyserositis. Rheumatoid arthritis in the elderly.*

PE 065. A RARE CAUSE OF SECONDARY PNEUMOTHORAX

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Introduction: Neurofibromatosis is a genetic disease that occurs by pathogenic variants in the NF1 gene. The most common features are the presence of café au lait spots and neurofibromas. In rare cases there may be pulmonary involvement, with the formation of pulmonary cysts.
Case report: The authors present the case of a 33-year-old patient, former smoker of 25 packs, worker in a concrete factory, who went to the emergency department for sudden onset of stabbing pain in the left hemithorax, which worsened during deep inspiration, without irradiation, starting 2 hours before. He denied fever, cough, sputum, wheezing or other symptoms. He had a personal history of neurofibromatosis and a family history of his mother with neurofibromatosis. On physical examination, the presence of multiple neurofibromas on the scalp and trunk and café-au-lait spots scattered throughout the trunk are highlighted. Pulmonary auscultation showed decreased breath sounds on the left and absence of adventitious sounds. Chest X-ray showed a pneumothorax on the left in need of drainage. An F16 thoracic drain was placed at the level of the 5th left ICS, anterior axillary line, with air outlet, which was uneventful. A CT scan of the chest was performed, which revealed moderate left pneumothorax, identifying a well-positioned drain in the pleural cavity. In the upper right paratracheal location, an oval, hypodense formation with regular limits is identified, measuring approximately 19 × 10 mm in axial diameter and 20 mm in longitudinal diameter, corresponding to a probable cystic structure. Refers to the presence of some subcutaneous nodular formations on the chest wall, probably in relation to neurofibromas, the largest on the left anterior chest wall measuring 17 × 10 mm. The patient kept the thoracic drain in place for 4 days, after which the pneumothorax was resolved by imaging, and the drain was removed uneventfully.
Discussion: This is a case of pneumothorax secondary to neurofibromatosis with pulmonary cysts that evolved favorably during hospitalization.

Keywords: *pneumothorax. Neurofibromatosis. Lung cysts.*

PE 066. PRIMARY OR SECONDARY PNEUMOTHORAX? – THAT IS THE QUESTION!

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Centro Hospitalar Universitário Lisboa Norte.

Introduction: Primary spontaneous pneumothorax is not infrequent, being more common in young smokers with a slim morphotype. The risk of suspicion must be high since it can present with a relatively nonspecific clinical presentation. In these age groups, secondary pneumothorax is not at all as frequent.
Case report: We present the clinical case of a 27-year-old young man, 7UMA smoker, self-employed, call center worker. It should be noted that the patient reported consumption of occasional concomitant hashish. He denied medical or surgical history or usual medication. The patient went to the SUC of the HSM because of chest discomfort and dyspnea after 1 month of evolution, with worsening pain in the precordial and right thoracic region. He also referred associated cough, with more than 2 weeks of evolution. Pulmonary auscultation revealed abolition of vesicular murmur on the right and hypertympanism on chest percussion. A chest Xray was performed, which documented pneumothorax on the right. Thoracic ultrasound is performed, showing the absence of pulmonary sliding and in M Mode barcode signal, to choose the best semiology site for placement of the drainage, which is why it was placed, a 16-gauge drain, in the 4th space intercostal in the mid-axillary line. No intercurrences during the procedure. With resulting oscillating and bubbling drainage. The chest X-ray after the procedure revealed hypotransparency in the right hemithorax, which raised suspicion of hematoma/contusion or possible re-expansion edema, which was not clinically compatible. Thus, he underwent chest CT, which revealed scattered areas of parenchymal densification/consolidation in the right lung field with air bronchogram, including ground glass, raising suspicion of an inflammatory process versus alveolar hemorrhage. Given the prolonged clinical situation, described by the patient, the most likely hypothesis was an eventual inflammatory/infectious process prior to the placement of the drain. Thus, on suspicion of community-acquired pneumonia and/or deposited hematic collection, he was hospitalized where he completed 7 days of effective antibiotic therapy (double intravenous antibiotic therapy). In a serial radiographic evaluation of the thorax, complete pulmonary expansion was documented, without appreciable fluid or blood drainage, without documented hemoptysis, although with evidence of a small amount of blood in the drain tube, without clinical repercussions. Simultaneously with the rapid resolution of the hypotransparency image on the right, which remains without full clarification of its etiology, raising the doubt of a possible pneumothorax secondary to a possible infectious process of the lung parenchyma.

Keywords: *Pneumothorax. Primary. Secondary. Consolidation. Diagnostic doubt.*

PE 067. IMPLEMENTATION OF THE INTENSIVE SMOKING CESSATION PROGRAMME IN A NORTHERN PORTUGUESE HOSPITAL CENTRE

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Introduction: STOP - Intensive Smoking Cessation Programme (ISCP) is a structured, intensive, smoker support programme lasting 6 weeks, which includes a set of behavioural and pharmacological approaches, based on a global understanding of the smoker, in the personal, family and professional context, as well as the motivations and barriers experienced in the process of change. The STOP programme is structured in 3 medical appointment and 4 teleconsultations carried out by the nurse or doctor. **Methods:** Type of study: descriptive and retrospective. Type of sampling: by convenience (individuals included in the STOP-ISCP between 1/05/2021 and 31/12/2022) Timing: 1st medical appointment - smoker assessment, discussion of therapeutic plan proposal and D-day scheduling. 1st teleconsultation - motivation reinforcement and answer to questions. 2nd medical appointment - D-day - first day that corresponds

to zero cigarettes. 2nd, 3rd and 4th teleconsultation - Reinforcement of motivation to continue without smoking, evaluation of adverse events and answer to questions. 3rd medical appointment - Evaluation and relapse prevention consultation to be carried out by the doctor. Reinforcement of the motivation to continue without smoking, evaluation of adverse events and answering questions. After 3 and 6 months telephone contact is made to evaluate the success of the Smoking Cessation Programme. Statistical analysis: IBM SPSS Statistics 26.0 software.
Results: The sample included (73%; n = 146) males with a mean age of 51.86 (± 10.82) and (27%; n = 54) females with a mean age of 40.80 (± 10.46). Of these, 43.72% (n = 87) stopped smoking. Single pharmacological treatment was used in 47.5% (n = 95), double in 46% (n = 92) and triple in 6.5% (n = 13). The drugs used were: varenicline (12.50%; n = 25), transdermal nicotine (38%; n = 76), citisinicline (35%; n = 70), nicotine gum (44.5%; n = 89), bupropion (6%; n = 12) and anxiolytics (12.5%; n = 25). The Mann Whitney U-test shows differences between the group that quit smoking and the group that did not, regarding dependence. Revealing less dependence in the Fagerström Test in those who quit smoking, but not in motivation (Richmond Test). There is a positive correlation with the number of cigarettes and continued smoking, but not with age or gender.
Conclusions: In our sample, there are statistically significant differences between individuals who quit smoking and those who did not, regarding nicotine dependence, but not in motivation. Individuals who quit smoking had lower values of nicotine dependence. In our study, age and gender did not influence smoking cessation, however dependence and number of cigarettes/day showed influence. The implementation of STOP-ISCP proved to be effective due to the high number of individuals who stopped smoking.

Keywords: *Smoking cessation. Programme. Consultation. Teleconsultation.*

PE 068. YOUTH HEALTHY MAN WITH DYSPNEA: A CLINICAL CASE

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Introduction: The increasing use of electronic cigarettes or vaping products, especially among young people, has led to the emergence of inflammatory lung injuries called EVALI (E-cigarette-or vaping-use-associated lung injury). EVALI is a new clinical condition that refers to lung damage associated with the use of electronic cigarettes or other similar vaping devices. It usually courses with dyspnea, fever, chills and respiratory failure.
Case report: A 26-year-old male, smoker of heated vaporized products, was admitted to the Multipurpose Intensive Care Unit (PICU) due to Bilateral Pneumonia. The imaging tests performed showed atypical radiological infiltrates and bilateral parenchymal infiltrates with a predominance of "crazy paving", which coursed with a picture of hypoxemic respiratory failure. There was a need for high-flow oxygen therapy and empirical antibiotic therapy was started with amoxicillin/clavulanic acid + azithromycin. Given the possibility of interstitial/allergic/autoimmune disease, fiberoptic bronchoscopy was performed, in which mucous and frothy secretions were observed. The bronchoalveolar lavage performed revealed a citrine yellow liquid suggestive of lipoid pneumonia, however, the definitive etiology remained unclear until the time of discharge. He started corticosteroid therapy. Given the progressive clinical and radiological improvement, he was discharged to the Pulmonology ward on the 5th day of admission to the PICU.
Discussion: The pathophysiology of EVALI is still not fully understood, and its diagnosis remains a diagnosis of exclusion, since there is no specific complementary test for its confirmation. The authors present this case because it is a serious situation that, although rare, can become increasingly frequent.

Keywords: *EVALI. Electronic cigarette. Dyspnea. Lung injury. Treatment.*

PE 069. CONSCIOUSNESS STATUS CHANGE SOLVED BY BRONCHOSCOPY

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Introduction: Foreign body (FB) aspiration occurs mainly in children, being rare in adults, with an estimated incidence of 0.2%. However, its incidence increases with age and also in patients with neurological or psychiatric pathologies, often not being witnessed or valued. Recognition of this entity requires clinical suspicion, given symptoms such as cough, dyspnea, wheezing, asphyxia or altered state of consciousness, with chest X-ray being the complementary initial diagnostic test. Bronchoscopy is the procedure of choice for FB removal, with a high success rate. During this procedure, the FB can be directly visualized, and granulation tissue, endobronchial stricture or edema – characteristic findings of tissue reaction – may be present. In children, rigid endoscopy is the procedure of choice for FB removal, given its ability to protect the airway, while flexible bronchoscopy can be used in adults, taking into account that in children, FBs are lodged mainly in the proximal tracheobronchial tree, which can be easily accessed by rigid bronchoscopy, while in adults FBs are often lodged in the distal tracheobronchial tree.
Case report: This clinical case reports a 59-year-old patient, totally dependent, institutionalized, but with a life of relationship, with history of chronic obstructive pulmonary disease and paranoid schizophrenia, with multiple psychotropic drugs and several recent hospitalizations for respiratory infections. He was taken to the emergency department due to dyspnea and peripheral desaturation, and was disoriented, dyspneic, in need of oxygen therapy at 4L/minute, with rude vesicular murmur, decreased in the lower third of the right hemithorax and bibasal fervors and scattered snoring. Analytically with increased inflammatory parameters and gasimetrically it showed global respiratory failure. Radiologically, the patient had hilar reinforcement, especially on the right, and hypotransparency in the lower third of the right hemithorax, suggestive of condensation, and empirical antibiotic therapy was started after cultural exams were taken. On the third day of hospitalization, the clinical status worsened, with prostration, scattered wheezing on auscultation and, due to respiratory acidemia, refractory to medical therapy, with hypercapnia as the probable cause of the neurological status, continuous non-invasive ventilation was started, which lasted for two days, with improvement in the respiratory and neurological condition. FB aspiration was confirmed by bronchofibroscopy, requested due to the worsening of the hypoxemic pneumonia initially admitted as a diagnostic hypothesis, which revealed food content, a pea, at the level of the right upper lobe, with inflammatory signs with associated abundant mucopurulent secretions. During the remaining hospitalization, the patient showed clinical improvement, with progressive and complete weaning of oxygen being possible.
Discussion: With this case we intend to recall the importance of the hypothesis of FB aspiration diagnosis, especially in the geriatric population, being necessary its differential diagnosis with pneumonia, exacerbation of COPD or asthma, lung cancer, among others, with persistent cough being the most common symptom. Highlighting the key role of fiberoptic bronchoscopy, a safe and effective test both in the diagnosis and treatment of this entity. Rapid diagnosis and intervention, guided by a high index of clinical suspicion, are essential to minimize potential severe complications of FB retention.

Keywords: *Aspiration. Foreign body. Bronchoscopy.*

PE 070. RECURRENT RESPIRATORY PAPILLOMATOSIS

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Introduction: Recurrent respiratory papillomatosis (RRP) is a rare manifestation of Human Papillomavirus (HPV) infection, mostly serotypes 6 and 11. RRP is characterised by the presence of large papillomas in the airways, which often recur, and treatment involves maintaining airway patency, often requiring multiple endobronchial procedures.
Case report: 68-year-old woman, ex-smoker (52 UMA), COPD GOLD E (FEV1 1.25 L - 35%) requiring O2 for ambulation, was referred to the technical appointment for persistent cough, haemoptoic expectoration (1 month of evolution) and dyspnoea at rest (mMRC4). She had imaging changes on chest CT with the presence of multiple polypoid masses in the distal trachea. Bronchofibroscopy, performed under general anaesthesia, revealed several papillomas in the distal trachea causing a narrowing of approximately 50% of the tracheal lumen, with no other changes notably in the oropharynx or vocal cords. Biopsies were taken and cryotherapy was used to destroy the lesions, as the patient was not a candidate for surgical resection. Histological examination subsequently showed several papillomatous structures with positive immunohistochemistry for human papillomavirus genotype 6.
Discussion: RRP is a chronic disease and difficult to treat due to its frequent recurrence rate and unpredictable aggressiveness. Although cryotherapy is not curative, it produces a rapid response with immediate improvement of symptoms and allows treating patients who are not candidates for surgery.

Keywords: *Papilloma. Cryotherapy.*

PE 071. A CASE FOR INTERVENTIONAL BRONCOLOGY

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Introduction: Foreign body aspiration in dental procedures is rare, with swallowing being far more common that aspiration.
Case report: We present a clinical case of a male, 76 years old. He was admitted to the ER after prosthetic drill aspiration during dental procedure, perceived by the patient, described as "object passing through the throat", without other symptoms. He was referred to the ER with chest X-ray documenting the presence of a foreign body in the left main bronchus. Subjected to rigid bronchoscopy with confirmation of prosthetic material allocated in the left main bronchus, promptly proceeding to its removal, without complications.
Discussion: Foreign body aspiration during dental procedures is rare but might be associated with serious complications. Although often asymptomatic, prompt identification and orientation by Interventional Pulmonology is crucial to prevent complications and unfavorable outcomes.

Keywords: *Foreign body aspiration. Dental procedure. Prosthetic drill.*

PE 072. NOT EVERYTHING THAT IS SUSPECTED IS MALIGNANT: AN UNLIKELY SURGICAL DIAGNOSIS!

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Introduction: Pulmonary tuberculosis is caused by *Mycobacterium tuberculosis* infection and remains one of the main causes of morbimortality worldwide. However, its prompt diagnosis is not always possible, since other pathologies may mask this identity, namely, organizing pneumonia, lung abscess, infection with nontuberculous mycobacteria, aspergillosis or malignancy.
Case report: We describe a case of a 52-year-old male patient, with chronic alcohol abuse and smoker (37.5 UMA), who went to the emergency room (ER) for right thoracalgia, with three days of evolution and progressive worsening of pain´s intensity at rest. He denied dyspnea, cough or palpitations. Reference to anorexia in the previous 15 days and weight loss of 2.5 kg in one week. He was eupneic in room air, SpO2 97% and hemodynamically stable. On pulmonary auscultation, vesicular murmur was maintained bilaterally, without adventitious noises. Regarding the complementary diagnostic tests performed in the ER, the X-ray showed hypotransparency in the right middle lobe and analytically presented leukocytosis, neutrophilia and C-reactive protein of 250 mg/L. He was hospitalized with diagnostic hypothesis of community-acquired pneumonia and completed empirical antibiotic therapy with amoxicillin/clavulanic acid and azithromycin. A thoracic computed tomography (CT) scan revealed "an area of consolidation of spiculated contours with central cavitation in the right upper lobe, 4 × 3.7 cm, and transcisural extension to the middle lobe and the apical slope of the right lower lobe. Solid pulmonary nodule with 7 mm in the left lower lobe and it is not possible to exclude contralateral secondary lesion. Centrillobular and paraseptal emphysema that predominate in the upper lobes and cylindrical tubular bronchiectasis in the right upper lobe.". When he was discharged, he was referred to the Pulmonology consultation to continue the study of the imaging finding. Abdominal and pelvic CT scans did not identify alterations and cranioencephalic magnetic resonance imaging excluded brain metastases. Subsequently, Positron Emission Tomography showed metabolically active disease limited to the right lung. He was submitted to CT-guided transthoracic needle biopsy and the anatomopathological result identified a solitary fibrous tumor. Respiratory function tests showed a mild obstructive ventilatory alteration, with FEV1/FVC ratio after bronchodilation of 69%, suggesting the diagnosis of chronic obstructive pulmonary disease, according to the GOLD criteria. After Therapeutic Decision Consultation, he was proposed for thoracic surgery and superior and middle bilobectomy was performed. The histology of the surgical specimens did not indicate signs of malignancy, however lymph nodes with reactive alterations and multiple epithelioid granulomas with central necrobiosis, macrophages, lymphocytes and positive Ziehl-Neelsen bacilli were identified, suggesting the diagnosis of tuberculosis. Molecular biology by Xpert MTB/RIF Ultra assay detected *Mycobacterium tuberculosi*s without resistance to rifampicin. The patient started directed treatment and is currently followed in the Pulmonology Diagnostic Center.
Discussion: Cavitary pulmonary disease can translate several etiological identities and this case proved to be challenging in demonstrating malignancy as a differential diagnosis of tuberculosis. The definitive diagnosis was obtained through the histology and molecular biology of the surgical specimens.

Keywords: *Neoplasm. Tuberculosis. Ziehl-Neelsen. Xpert MTB/RIF Ultra assay.*

PE 073. DRESS SYNDROME RELATED TO TUBERCULOSIS TREATMENT, A CLINICAL CASE

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Introduction: Tuberculosis remains one of the most relevant infectious diseases worldwide, and has a significant incidence in Portugal. The recommended first-line treatment consists of a combina-

tion of isoniazid (Iso), pyrazinamide (Pir), rifampicin (Rif) and ethambutol (Eta) for 2 months, followed by 4 months with Iso + Rif. The DRESS syndrome (Drug reaction with eosinophilia and systemic symptoms) is a severe and rare hypersensitivity reaction, induced by drugs, in the present case, tuberculostatic agents. The clinical presentation is variable, and skin rash, organ dysfunction, systemic symptoms, analytical changes, among others, may occur.
Case report: The authors present a clinical case of a male patient, aged 78 years, with no relevant personal history and without usual medication, diagnosed with pulmonary tuberculosis in May 2023, after performing bronchoscopy with bronchial aspirate. He started treatment with Iso + Rif + Pir + Eta + pyridoxine in June, with clinical and analytical reassessment after 1 week of treatment. In the reassessment, the patient showed marked asthenia and analitical elevation of transaminases (3-5 upper limit of normal - ULN), which led to interruption of the treatment. At home, the patient presented worsening of asthenia, and fell with head trauma, so he went to the Emergency Department (ER) on the 25th of June. Upon arriving at the ER, the patient reported experiencing a two-week period of asthenia, following the initiation of tuberculosis treatment. Acute traumatic intracranial lesions were excluded, however severe hyponatremia, hypokalemia, increased transaminases (3-5 ULN) and mild peripheral eosinophilia were detected. Due to liver toxicity secondary to tuberculostatic drugs, asthenia and hydroelectrolytic changes, the patient was admitted to the pulmonology service. From the 3rd day of hospitalization, he developed fever and generalized maculopapular rash, predominantly on the trunk. He had a gradual worsening of the general condition, with asthenia. He did not have any change on chest radiograph. He had worsening of cytolysis (AST and ALT > 10 ULN) and eosinophilia. An eosinophil-mediated hypersensitivity reaction was hypothesized. He presented atypical lymphocytes and HHV-6 positivity. The clinical case was discussed with Dermatology and Immunoallergology, and DRESS syndrome was assumed. He started treatment with systemic corticosteroid therapy (methylprednisolone 1 g 3 times a day, then oral prednisolone for 10 days) and antihistamines, with resolution of the rash, eosinophilia and normalization of transaminases. Epicutaneous and lymphocyte transformation tests were performed, with indeterminate results. An alternative treatment plan for tuberculosis was established with levofloxacin, amikacin and linezolid, with the local Pneumological Diagnostic Center. Three weeks after admission, the patient is clinically stable, without complications from the ongoing treatment, with corrected hydroelectrolytic changes. An antimicrobial susceptibility test of the second line tuberculosis treatment is being processed, and he is waiting to repeat the epicutaneous test, for gradual reintroduction of first-line tuberculostatics.
Discussion: DRESS Syndrome is a rare but potentially fatal complication associated with the tuberculosis treatment. An early diagnosis, with multidisciplinary involvement, the withdrawal of anti-tuberculosis drugs, use of systemic corticosteroids and antihistamines, have a strong prognostic impact.

***Keywords**: DRESS syndrome. Tuberculosis. Tuberculosis treatment. Hypersensitivity reactions.*

PE 074. A FORM OF PRESENTATION OF TUBERCULOSIS

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Introduction: Tuberculosis is a disease caused by *Mycobacterium tuberculosis* and typically affects the lungs, causing significant morbidity and mortality worldwide. It can present with symptoms such as fever, weight loss, productive cough, or night sweats and can spread to cause extrapulmonary tuberculosis, which can manifest as pleural, lymphadenitis, hilar lymphadenopathy, miliary, meningitis, pericardial, or adrenal tuberculosis.
Case report: The authors present the case of a 30-year-old man, from India, working as a waiter, non-smoker, with no known medical history. He presented to the Emergency Department with left-sided pleuritic chest pain, evening fever, and loss of appetite, evolving for 7 days, with no other complaints. He had previously visited the ED previously with a small left pleural effusion. On physical examination, no abnormalities were noted. Laboratory tests showed an elevation of inflammatory parameters, and HIV serology was negative. Chest X-ray revealed opacities in the left hemithorax. Thoracentesis was performed, and sero-hematic pleural fluid was drained, showing characteristics compatible with an exudate, suggestive of empyema, despite a predominance of lymphocytes. The patient started ceftriaxone and clindamycin, which he completed in 21 days. Chest CT showed "small volume bilateral pleural effusion and scarce gas bubbles in the chest wall along the course of the thoracic drain. Moderate volume pneumothorax (24 mm thickness) in the left lower pleural recess, likely iatrogenic. Dispersed bilateral micronodules in the lung parenchyma with non-specific appearance. Centrilobular micronodules in the right lung, suggestive of inflammatory or infectious dissemination. No consolidations." During hospitalization, a right pleural effusion appeared in the chest X-ray, and an ultrasound revealed a "moderate, highly septated pleural fluid collection, elevating the diaphragmatic dome, unsuitable for biopsies or thoracic drain placement." Influenza B was isolated in the respiratory virus panel, and the patient started oseltamivir. The first sputum examination showed isolation of Moraxella catarrhalis. No isolates were detected in blood cultures, urinary antigens, or bronchoalveolar lavage. Bronchoscopy didn't reveal any endobronchial lesions. The follow-up chest-CT showed "persistent empyema on the left with marked pleural thickening, suggesting strong loculation, causing atelectasis; increased right pleural effusion, occupying two-thirds of the lower hemithorax, with a thickness of 30 mm. Some centrilobular micronodules are scattered throughout the lobes, suggesting an active infectious process with endobronchial dissemination." Pleural biopsies revealed "pleural tissue and fibrin with a predominance of lymphohistiocytic infiltrate with Langhans-type multinucleated giant cells and non-necrotizing epithelioid granulomas." *Mycobacterium tuberculosis* complex was isolated in one of the sputum examinations and in the pleural fluid, and serum and pleural fluid ADA levels were increased. The diagnosis of pulmonary tuberculosis with bilateral pleural involvement was established, and the patient started antituberculosis treatment, which led to rapid improvement. He was referred to the CDP for further management.
Discussion: Pleural tuberculosis refers to various manifestations of pleural involvement by Mycobacterium tuberculosis and can present in different forms, such as pleural effusion, empyema, or pleuritis. It is the most common form of extrapulmonary tuberculosis. The objective of this clinical case is to present a form of presentation of pulmonary and bilateral pleural tuberculosis in an immunocompetent patient.

***Keywords**: Pulmonary tuberculosis. Pleural tuberculosis. Respiratory infection.*

PE 075. KNEE AND LUNG: JUST ONE ZIEHL-NEELSEN AWAY

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Introduction: Tuberculosis represents a disease with significant prevalence and impact worldwide, with pulmonary tuberculosis as

the most frequent form of presentation. Among cases of extrapulmonary tuberculosis, osteoarticular tuberculosis accounts for a prevalence of 10 to 35%.
Case report: A 35-year-old female patient, a passenger vehicle driver, presented to the Orthopedics appointment with complaints of knee pain, limited mobility and asymmetric swelling of the right knee with approximately 15 years of evolution. Inflammatory and degenerative changes were evident at the metaphyseal and intra-articular levels on a 2021 MRI scan, with a previously assumed diagnosis of villonodular synovitis. The patient denied constitutional symptoms (fever, night sweats, weight loss, fatigue, or anorexia) and respiratory symptoms (cough, sputum production, chest pain, or dyspnea) during this period. Due to functional and symptomatic worsening despite anti-inflammatory therapy and analgesia, total knee arthroplasty was proposed. From the analysis of intraoperative osteoarticular fragments stands out histopathological examination with synovial tissue and subsynovial fibrous connective tissue fragments showing lymphohistiocytic inflammatory infiltrate, associated with the formation of multiple granulomas. The cultural examination confirmed positivity for Mycobacterium tuberculosis complex. Consequently, the patient was referred to the Pulmonary Diagnostic Center (PDC) for further orientation. During evaluation at the PDC were detected positive direct mycobacteriological examination in sputum samples, positive Mycobacterium tuberculosis complex DNA detection, and chest CT scan with evidence of consolidations in both lung apices, associated with cavitation areas and multiple centrilobular micronodules with a "tree-in-bud pattern. Thus, the diagnosis of osteoarticular and cavitary pulmonary tuberculosis was established, and the patient started treatment with Isoniazid, Rifampicin, Pyrazinamide, and Ethambutol. After 67 directly observed doses of the mentioned regimen and prior isolation sensitivity testing indicating susceptibility to all first-line anti-tubercular agents, the patient's treatment was switched to a maintenance regimen with isoniazid and rifampicin. Concurrently, physiatric treatment of the right knee was initiated. The patient completed a total of 12 months of treatment without complications, demonstrating clinical and radiological improvement during follow-up, and is currently under posttreatment surveillance at the PDC.
Discussion: This case highlights the diagnostic challenge posed by osteoarticular tuberculosis and the serious consequences of a delayed diagnosis, especially in a young patient. Given the diverse presentations of tuberculosis, maintaining a high degree of suspicion for rarer and atypical presentations is crucial, accompanied by an enlarged etiological investigation.

***Keywords**: Osteoarticular tuberculosis. Pulmonary tuberculosis.*

PE 076. A RARE CAUSE OF PERITONEAL IMPLANTS

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Introduction: The prevention, diagnosis and early treatment of tuberculosis are the key elements for the control of this pathology in the country and worldwide. However, the multiplicity of clinical manifestations can delay diagnosis.
Case report: A 38-year-old man, evacuated from Guinea-Bissau, was admitted to the emergency department. He denied known diseases and medication. He was a non-smoker. He reported a 3–4-week history of abdominal pain and diarrhoea with mucus but without blood. He denied constitutional symptoms. On physical examination, signs of malnutrition were evident, and abdominal examination revealed tenderness on deep palpation, mainly in the right hypochondrium and epigastrium, without signs of peritoneal irritation. Analytical evaluation revealed: anaemia Hb 9.8 g/dL, lymphopenia, elevated inflammatory markers, Creactive protein 1.77 mg/dL, hypokalaemia and hyponatremia; human immunodeficiency virus and hepatitis B and C virus were negative. A thoracoabdominopelvic CT scan was performed, which showed: tree-in-bud pattern in the upper lobe of the right lung; multiple supra and infradiaphragmatic adenopathies; colonic and small bowel distension, identifying multiple images of oval morphology within them. The patient was admitted for further investigation, and empirical antibiotic therapy with ceftriaxone was started after blood cultures and coprocultures. Due to intestinal occlusion, he underwent exploratory laparotomy, which revealed phytobezoar obstruction. During surgery, adenopathies and multiple peritoneal implants were observed and sent for study. Due to intestinal obstruction, he underwent an exploratory laparotomy, revealing obstruction caused by a phytobezoar. During surgery, peritoneal lymph nodes and multiple implants were observed and sent for further examination. Given the clinical presentation, the suspicion of disseminated Tuberculosis vs. Neoplasia (with peritoneal carcinomatosis) was raised. The bronchial secretions and the bronchoalveolar lavage, collected by bronchofibroscopy, revealed positive DNA research by PCR for Mycobacterium tuberculosis, without rifampicin resistance mutation. The anatomopathological results were negative for neoplasia, showing granulomatous disease in the peritoneal implants, with foci of central necrosis. A diagnosis of disseminated tuberculosis was made and therapy with isoniazid, rifampicin, pyrazinamide and ethambutol was initiated.
Discussion: The authors present this clinical case to remind that tuberculosis should be included in all differential diagnoses, since it can mimic other pathologies and have very diverse presentations depending on the organs affected. It is important to integrate demographic and epidemiological data along with the clinical presentation.

***Keywords**: Disseminated tuberculosis. Peritoneal implants.*

PE 077. DOES CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP) IMPROVE THE EXERCISE CAPACITY OF ADULTS WITH EXPIRATORY CENTRAL AIRWAY COLLAPSE?

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Introduction: The spectrum of expiratory central airway collapse encompasses two distinct pathophysiologic entities: excessive (or expiratory) dynamic airway collapse of the posterior membrane (EDAC) and tracheobronchomalacia (TBM). A certain degree of invagination of the posterior membrane represents a physiologic process, but when this process is exaggerated the proposed term is EDAC. TBM is defined as excessive expiratory central airway collapse with luminal narrowing secondary to weakness or instability of the cartilaginous portion of the airway. This occurs secondary to either congenital disease involving connective tissue framework of the airway, or may be acquired, secondary to long standing mechanical, inflammatory airway injury or extrinsic compression.
Case report: The authors present the case of a 70-year-old man, former construction worker, nonsmoker, with diabetes mellitus, systemic hypertension, asthma, atrial fibrillation, heart failure and several respiratory infections in the past. Also diagnosed with severe obstructive sleep apnea 4 years ago, but non-compliant with adaptive positive airway pressure (APAP) therapy. He was admitted in the emergency department with productive cough and dyspnoea with several years of progression and worsening in the previous week. Chest X-ray was compatible with community acquired pneumonia and also demonstrated medium and lower lobes opacities suggestive of atelectasis. Those changes were confirmed by chest computed tomography (CT). Amoxicillin/clavulanate and clarithromycin were started and bronchofibroscopy (BFC) showed abundant

sputum that was aspirated with complete resolution of the atelectasis. During BFC it was also observed severe central airway expiratory dynamic collapse > 90% in trachea and main bronchi, compatible with combined TBM and EDAC, probably secondary to asthma and previous respiratory infections. Therefore, asthma treatment was optimized to high dose ICS/LABA and LAMA, APAP adherence was reinforced, and he was also prescribed mucolytic agent and airway clearance techniques exercises. Five months later the patient reported improvement of cough, but progressive worsening of dyspnea (mMRC1 to mMRC3). Treatment was discussed among colleagues: he was not candidate to endotracheal prothesis due to risk of aggravated secretions and diffuse airway and bronchial involvement and was not candidate to surgery due to comorbidities. A 6-minute walking test (6MWT) demonstrated a desaturation in the first five minutes of the test (SpO2 85%), with a Borg modified scale (BMS) of 5. A new 6MWT was performed using portable CPAP (12 cmH2O) throughout the test and no desaturation was observed (minimum SpO2 97%) and BMS 0. The patient was advised to use CPAP during exertion but is reluctant until this moment. Expiratory central airway collapse symptoms are nonspecific, often mislead to other chronic respiratory diseases, contributing to a delayed diagnosis. It is confirmed by dynamic chest CT imaging or bronchoscopic examination of the airways during respiration. Treatment is directed towards treating the etiology and keeping the airway patent, achieved by either CPAP, airway stenting or surgical measures.
Discussion: In this case report it was demonstrated that it is possible to control symptoms and exercise desaturation with CPAP. Although this brings logistic and quality of life questions and more studies are needed, this seems an appropriate therapy for those whose treatment options are currently extremely limited.

Keywords: *Central airways dynamic collapse. CPAP ventilation.*

PE 078. ENDOBRONCHIAL LESIONS AS A MANIFESTATION OF M. TUBERCULOSIS INFECTION – A CASE REPORT

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Introduction: Tuberculosis is one of the main causes of death by infectious disease in the world. The general symptoms associated with active disease make it difficult to quicky diagnose without a strong suspicion, delaying treatment. Patients with human immunodeficiency virus (HIV) are at a higher risk for active or latent disease because of the suppression and anergy of immunological response. This effect is reduced by early introduction of antiretroviral therapy (ART), even so, patients with HIV infection under ART are still at a higher risk of developing active disease when compared to the uninfected population.
Case report: A 55 year old female, with HIV infection with good compliance to ART, was admitted to the infectious disease department with dyspnea, asthenia, night sweats and involuntary loss of body weight (6 kg in 6 months). No improvement was seen after multiple rounds of empiric antibiotics. On chest radiograph, a micronodular pattern with bilateral distribution and a right parahilar consolidation with ipsilateral mediastinal shift could be seen. Computerized Tomography chest scan revealed micronodulation with apical-caudal distribution and a consolidation enveloping the right superior lobar bronchus and right middle lobar bronchus. On the blood work a slight elevation of cholestatic liver enzymes, lowering of total CD4+ count (376 cell/mm^3), undetectable viral load and negative Interferon- Release Assay (IGRA). The initial microbiological screening was negative. Because of the high suspicion of tuberculosis infection, videobronchoscopy was done and on endobronchial inspection several white, macular lesions with bilateral distribution but more numerous on the left bronchial tree could be seen. Biopsies (BB) of the lesions, bronchial alveolar lavage (BAL) done at the superior segment of the right lower lobar bronchus and bronchial aspirate (BA) was obtained. Invasive microbiological screening was negative, but histopathological analysis of BB and BA showed granulomas with epithelioid macrophages, Langhans giant cells and focal caseation necrosis. A diagnosis of active tuberculosis with high degree of certainty was made based on the presence of risk factors (ex: low CD4+ cell count; patient from a high incidence area – Angola -; husband with positive IGRA test) and suggestive symptoms, imagiological and histopathological findings. Treatment was initiated with 2HRZE/4HR protocol and supplementation with pyridoxine. A new videobronchoscopy was performed 4 weeks after start of treatment and total regression on the lesions previously described was seen.
Discussion: The diagnosis of *Mycobacterium tuberculosis* infection is usually done through direct microscopic observation of acid-alcoholfast-bacilli (AAFB) and/or a positive result on rapid molecular assays. Definitive diagnosis is made through positive growth on cultures. On the absence of positive tests in the setting of high clinical suspicion for TB, unsuccessful attempts to obtain adequate expectorated or induced sputum samples or urgent diagnostic information is needed, obtaining bronchoscopy specimens through bronchial/transbronchial biopsies, BAL and or BA should be considered. On this specific case, the presence of suggestive symptoms, imagiological and histopathological findings from BB and BA, even in the absence of positive microbiological screening, allowed the diagnosis of tuberculosis to be made and after starting treatment, total resolution of lesions initially found was observed.

Keywords: *Tuberculosis. Human immunodeficiency virus. Bronchoscopy procedures.*

PE 079. ANTIBACILLARY TOXICITY – THE RISK BENEFIT OF THERAPY

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Introduction: Although treatment with antibacillars is generally well tolerated, patients may experience antibacillar-related toxicity, some of these adverse effects having irreversible potential.
Case report: We present the clinical case of a 27-year-old man from Guinea-Bissau. He had a history of pulmonary tuberculosis in 2014, chronic kidney disease (CKD) stage 5, in hemodialysis, systemic lupus erythematosus and lupus nephritis, as well as chronic hepatitis B virus (HBV) infection. He had completed 6 months of treatment with antibacillars, which was not confirmed. He was polymedicated due to multiple comorbidities and immunosuppressed. He was referred to the Emergency Department of the Nephrology consultation for a 4-week history of dry cough predominantly in the afternoon, night sweats, anorexia and weight loss of 5 kg in 3 months. After exhaustive study in a patient with radiological changes in chest CT suggestive of active tuberculosis despite negative serial sputum smears, the diagnosis was confirmed by PCR for *Mycobacterium tuberculosis* and cultural examination in bronchoalveolar lavage. First-line antibacillary therapy with HRZE (isoniazid, rifampicin, pyrazinamide, ethambutol) was started, and HRZ was discontinued after 9 days due to liver toxicity. Ethambutol was maintained and amikacin was started, adjusted to renal function, and isoniazid was restarted in a phased manner with good tolerance. There was a new onset of hepatotoxicity with the introduction of rifampicin, which was discontinued after 3 days. After normalization of liver function, progressive introduction of pyrazinamide was performed without reappearance of toxicity, so amikacin was suspended after 11 days. He was discharged with HZE + levofloxacin and supplementation with pyridoxine 40 mg id with the aim of completing

12 months of treatment in an immunosuppressed patient. Due to complaints of decreased visual acuity, 2 months later he was observed by Ophthalmology, and ethambutol-related toxicity was assumed and the therapy was suspended. Therapy with HZ + levofloxacin and pyridoxine was maintained, with improvement of symptoms, despite some persistent alterations, as well as follow-up in ophthalmology and neurology consultations. Treatment was concluded with clinical and radiological improvement, with no other adverse effects afterwards.
Discussion: The complexity of this case shows that the pharmacological toxicity of antibacillars remains a challenge, especially in patients with multiple comorbidities where the risk of toxicity and drug interactions increases exponentially. Unlike hepatotoxicity which can be easily ruled out, ocular toxicity requires greater awareness in early detection of symptoms and in some cases specialty follow-up. Early diagnosis prevents the development of irreversible damage.

***Keywords**: Toxicity. Antibacillars. Decreased visual acuity.*

PE 080. UNG VOLUME VARIATION MONITORING BY ELECTRICAL IMPEDANCE IN NEUROMUSCULAR PATIENTS WITH SEVERE VENTILATORY DYSFUNCTION: A NEW TOOL FOR THERAPEUTIC OPTIMIZATION

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Introduction: Neuromuscular diseases (NMD) are characterized by global weakness of the respiratory muscles which is the main cause of the development of respiratory failure. These patients present with significant and progressive ventilatory dysfunction and are unable to cough effectively to expel airway secretions, requiring specific treatment strategies. For a better clinical assessment of the effectiveness of these strategies, new and updated monitoring tools are needed.
Objectives: This study has a proof-of-concept design and aims to evaluate the efficacy of monitoring tidal volume (VT), respiratory rate (RR) and minute ventilation (MV) with an electrical impedance device during daytime ventilatory support, air-stacking (AS) maneuver and mechanically assisted cough (MAC) in a group of neuromuscular patients with severe ventilatory dysfunction.
Results: We studied 5 patients with NMD (Congenital Myopathy, 2 with Amyotrophic Lateral Sclerosis and 2 with Duchenne Muscular Dystrophy). With the electrical bioimpedance device, we observed a trend of increase in mean VT in mouthpiece ventilation when compared to spontaneous breathing (580 68 versus 316.194 ml), as well as a trend to the same increase during AS maneuver (723 ± 285 ml) and MAC (674 ± 95 ml). We observed the same trend regarding mean MV, where higher values were recorded in mouthpiece ventilatory support when compared to spontaneous ventilation (9 ± 1.9 versus 6.5 ± 4.7 L/min), with no differences in the comparison of these values during the AS maneuver (8.6 ± 1.7 L/min) and MAC (mean 8.2 ± 1.6 L/min). Regarding respiratory rate, we did not observe significant differences, but a tendency to increase only in spontaneous breathing (17 ± 10 bpm) compared to mouthpiece ventilation (15 ± 2.6 bpm), AS (14 ± 3.3 bpm), and MAC (14 ± 3.6 bpm).
Conclusions: It is possible to measure real-time variations of VT, FR and MV with electrical impedance device during spontaneous breathing, during daytime mouthpiece ventilatory support, AS maneuver and MAC. The present study is a proof of concept and may open new research perspectives in this area for better titration of therapeutic parameters.

***Keywords**: Neuromuscular diseases. Lung volume. Respiratory failure. Cough. Ventilatory support.*

PE 081. FROM EXPOSURE TO INFECTION – REGARDING A CLINICAL CASE

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Introduction: Hypersensitivity pneumonitis (HP) is an immune-mediated inflammatory disease of the lung parenchyma. It can be phenotypically classified into fibrotic or non-fibrotic. The differential diagnosis is challenging and must include: complete exposition history, multidisciplinary discussion and sometimes, evaluation of lymphocytosis on bronchoalveolar lavage and histopathological findings.
Case report: A 73 years-old patient, male, former worker of wool textile industry and cheese manufactory. Referred to pneumology consultation, due to 1 month duration complains of cough, initially dry but now with mucous sputum and mild to moderate efforts fatigue (mMRC 2), worst after SARS-CoV-2 infection. The X-ray showed a reticular pattern on the upper half of the right lung and also on the superior one third of the left lung. He was treated with antibiotic and short corticotherapy cycle. The follow-up, 1 month later, showed clinical and radiological worsening. A thorax CT-scan was performed demonstrating a reticular pattern and ground glass opacities mainly on both superior lobes, some with honeycomb pattern and diminished lung parenchyma density. In view of these findings, the hypothesis of diffuse interstitial pneumonitis versus Post-Covid Organizing Pneumonia was equated, which is why a corticosteroid regimen was initiated. Although there was clinical improvement, 8 months later, the patient presented clinical worsening associated to deflazacort dose reduction leading to his hospital admission. In addition to repeating a chest CT scan, with images compatible with the findings described above, videobronchofibroscopy was performed, which revealed scattered inflammatory signs, friable mucosa and thick white secretions. Bronchoalveolar lavage was performed, a microbiological study and analysis of lymphocyte populations were requested, the results of which showed: 10% lymphocytes and 72% neutrophils (under corticotherapy). The following infectious agents were also identified: *Haemophilus Influenzae; Rhinovirus/Enterovírus; Parainfluenza* e *Pneumocystis jirovecii* (PJ). It should also be noted that, although the anamnesis did not determine exposure to birds, the lab results showed an increase in avian precipitins I (23.2 mg/L). In this context, the following diagnostic hypotheses were considered: Acute exacerbation of Hypersensitivity Pneumonitis versus *Pneumocystis jirovecci* Pneumonia. In terms of therapeutic approach, he started targeted antibiotic therapy with cotrimoxazole and systemic corticosteroid therapy with methylprednisolone in a regressive scheme, with evident clinical and radiological improvement.
Discussion: With this case we intend to demonstrate the challenge underlying the differential diagnosis between an acute exacerbation of hypersensitivity pneumonitis versus an infectious complication. It should be noted that, in addition to systemic corticosteroid therapy having immunosuppression as a potential adverse effect, it is, like interstitial lung diseases, a risk factor for PJ infections.

***Keywords:** Diffuse interstitial pneumonitis. Hypersensitivity pneumonitis. Organizing pneumonia.*