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CORRIGENDA TO EXPOSED POSTERS, 39º CONGRESSO DE PNEUMOLOGIA 2023

Corrigenda do "39º Congresso de Pneumologia 2023"

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As seguintes comunicações:
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PE 035. Fungal pneumonia of rare etiology

Comunicações não foram incluídos no momento da publicação e por isso não seguem a paginação.

Communications were not included at the time of publication and for that reason, they do not follow the pagination.

PE 007. MET COMPLEX ALTERATIONS AND MET EXON 14 SKIPPING AND EML4-ALK FUSION IN ADENOCARCINOMA AND METASTASIS – TWO CASES REPORT

Ana Filipa Ladeirinha, Ana Alarcão, Maria Reis Silva, Teresa Ferreira, Catarina Eliseu, Maria Viseu, Vânia Almeida, Guilherme Fontinha, Daniela Madama, Fernando Barata, Vítor Sousa

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Introduction and objectives: MET mutations and/or amplifications are primary oncogenic drivers, in pulmonary carcinomas concerning mechanisms linked to anti-EGFR/ALK therapies resistance. Among MET mutations METex14 skipping is one the most frequent. Broad ranges of molecular alterations lead to METex14 skipping and concomitant growth factor mutations are possible.
Methods: Woman – solid adenocarcinoma. Mutation analysis – NGS (Genexus, Oncomine Precision Assay Panel, Thermo Fisher Plataform). Macrodissection performed and nucleic acid extraction carried out with the MagMAX FFPE DNA/RNA Ultra Kit. For MET gene the Oncomine Precision Assay Panel search: DNA Hotspots (SNVs/Indels), CNVs (polysomy/amplification), intergenetic and intragenetic fusions. Woman – right intracranial temporal brain pulmonary adenocarcinoma metastasis. Mutational study by next-generationsequencing (Genexus, Oncomine Precision Assay Panel, Thermo Fisher Plataform). Manual macrodissection performed and nucleic acid extraction carried out with MagMAX FFPE DNA/RNA Ultra Kit.
Results: MET-MET.M13M15.1 variant – corresponds to MET exon 14 skipping. Two other mutations: c.3082+1G>A;p.? (47,5%) and c.3082+1_3082+2insA;p.? (25,8%), formed protein still unknown. MET gene amplification (copy number: 4.45) was also identified. MET-MET.M13M15.1 variant – corresponds to MET exon 14 skipping. ALK gene fusion with partner being the gene EML4 (EML4-ALK. E13A20) and ALK expression imbalance. RET gene: nonsense mutation c.2689C>T;p.(Arg897*) identified.
Conclusions: Patient started systemic chemotherapy in February with Carboplatin and Pemetrexed, and since March with Pemetrexed. MET exon 14 skipping mutation is associated with response with MET TKIs. Classification in high-level MET amplification is evolving and may differ according to the assay used for testing. According to the same Guidelines, for results obtained by NGS; a copy number greater than 10 is consistent with the classification of high-level MET amplification. Patient started Brigatinib therapy for ALK rearrangement in October 2022. No other therapy was registered prior to the study. The patient is clinically well with a good Performance Status (PS = 0). MET exon 14 skipping is associated with response with MET TKIs. ALK gene fusion associates with response to ALK tyrosine kinase inhibitor therapy. There is no literature reference to ALK expression imbalance. The mutation c.2689C>T;p.(Arg897*) in RET gene lacks relevant evidence in public data sources included in relevant therapies protocols: EMA/ESMO/NCCN. The emergence of complex cases is becoming frequent, due to actual advanced and informative technologies. Multidisciplinary therapeutic decision meetings are informative for tumoral mutations discussing and interpretation in patients therapy to follow higher drugs/clinical trials in progress as well as prognosis precision.

Keywords: *MET Exon 14 Skipping. EML4-ALK Fusion. Met Gene Amplification. NGS.*

PE 008. EXPLORING PULMONARY CAVITATION – A CLINICAL CASE

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Introduction: Lung cavitations (LC) are gas-filled spaces within a consolidation, mass, or lung nodule, whose wall thickness may vary. Their differential diagnosis is extensive, including infections, systemic diseases (such as vasculitis), and cancer. We present a case of LC that required an extensive study and proved to be a real challenge in the etiological diagnosis.
Case report: A 64-year-old woman, former smoker since 2018 (30 pack-years), working in a typography. She has a history of degenerative changes in the spinal column and left breast cancer treated with mastectomy and adjuvant radiotherapy in 2010. No other significant exposures, denies any contact or personal history of tuberculosis. She has been followed up in the Pulmonology clinic since 2017 for Asthma-COPD overlap, with functional respiratory testing revealing moderate bronchial obstruction, hyperinflation, and positive bronchodilation test. A chest CT in 2017 showed chronic thickening of the bronchial airways. In 2022, due to worsening dyspnea, she repeated a chest CT in June, which described a new lesion in the right upper lobe that had mixed density with a subsolid border and an interior cavitary, measuring 2 cm in its greatest axis. Analytically, there was no leukocytosis, neutrophilia, or eosinophilia, negative CRP, total IgE within normal values, negative IgE and IgG for *Aspergillus* spp, and negative autoimmune study. Sputum cultures were negative for microbiology. She underwent bronchoscopy, which showed no endobronchial abnormalities. Bacteriological, mycobacteriological, mycological, DNA of *Mycobacterium tuberculosis*, Galactomannan antigen, and cytological examination of bronchoalveolar lavage were all negative. A follow up CT scan of December still showed the LC. A PET-CT in March 2023 revealed no abnormalities. The case was discussed in a multidisciplinary oncology meeting, where it was suggested that, due to worsening osteophytosis of the cervical vertebrae, the LC might be related to lung parenchymal traction changes.
Discussion: Despite risk factors for cancer (former smoker, history of previous neoplasia), and this being the most likely diagnostic hypothesis, the presence of degenerative bone changes in the spinal

column can explain the appearance of the LC. This case highlights the importance of conducting an extensive investigation to rule out other potential causes of LC.

Keywords: *Pulmonary cavitation.*

PE 009. DO NÓDULO HEPÁTICO AO ADENOCARCINOMA DO PULMÃO

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Caso clínico: Doente de 74 anos, sexo feminino, antecedentes de dislipidemia medicada com estatina de baixa potência, não fumadora, reformada da Agricultura, foi encaminhada ao Serviço de Urgência por quadro de náuseas, anorexia, astenia e desconforto abdominal com 2 semanas de evolução. Associadamente, referia perda ponderal de 2 Kg em 1 mês, bem como, queixas de tonturas com igual tempo de evolução. Apresentou ainda 1 pico febril, vespertino, de 38.9 ºC que cedeu após toma única de paracetamol. Analiticamente, anemia normocítica, normocrómica estabilizada em Hb 12,7 g/dL. Realizou ecografia abdominal que revelou sinais de heptopatia crónica incipiente, provável hemangioma hepático com 13 × 13 mm no segmento VIII e derrame pleural esquerdo de pequeno volume. Neste sentido, realizou TC-Torácico que revelou pequeno derrame pleural à esquerda, aparentemente septado com espessura máxima de 1,5 cm, a que se associa consolidação parcial com um foco de atelectasia do lobo inferior esquerdo, de aspecto inespecífico. Observavam-se múltiplos micronódulos dispersos em todos os pulmões de etiologia indeterminada. Registavam-se ainda alguns pequenos gânglios linfáticos mediastínicos, inespecíficos. Nas imagens em que se abrangeu parcialmente o abdômen superior identificam-se múltiplos nódulos hipodensos hepáticos, que no contexto sugerem a possibilidade de lesões secundárias. Verificou-se ainda um trombo determinando marcada redução da permeabilidade de ramo da artéria lobar inferior direita (TEP). Completou estudo com TC-Abdomino Pélvico valorizando a presença de nódulos hepáticos (o maior dd de 1.8 cm) e esplénicos (o maior de 0,8 cm), sem outras alterações valorizáveis. Realizou ainda TC-Crânio e RM-Cerebral, sem alterações. Neste sentido, e com intenção de presseguir estudo, realizou biópsia a nódulo hepático de 1,8 cm cujo resultado histológico revelou metastização hepática de adenocarcinoma primário de pulmão, padrão tubulo-glandular com estroma desmoplásico. Perante isto, foi realizada broncofibroscopia cujo resultado foi inconclusivo, negativa para exame micobacteriológico. Realizou ainda PET-TC que concluiu foco hipermetabólico no lobo inferior esquerdo (e lobo inferior direito) suspeito de envolvimento neoplásico maligno de alto grau metabólico, com metastização ganglionar laterocervical inferior e mediastino-hilar bilateral, hepática múltipla e óssea. Focos hipermetabólicos no lobo esquerdo da tiroide e no colon ascendente. Assim, completou estudo com endoscopia digestiva alta e baixa, com adenoma viloso de displasia de alto grau e fez ainda estudo NGS com fusão do ALK, variante 3a/b. Neste sentido, orientada para consulta de Oncologia onde iniciou tratamento de primeira linha com Alectinib 600 mg 12-12h.

Discussão: O interesse do presente caso clínico assenta na compreensão de que, nem sempre a clínica dos nossos doentes é linear e é este o desafio da Medicina prática. Nem sempre os sintomas são os típicos, e por isso, a aplicabilidade do "nem sempre nem nunca" na nossa prática clínica. Assim, devemos optar por uma visão holística no sentido de irmos ao encontro do diagnóstico para podermos instituir terapêutica atempada e conseguir aumentar a esperança de vida aos nossos doentes.

Keywords: *Nódulo hepático. Adenocarcinoma pulmão.*

PE 010. TIME TO CATCH A DEEP BREATH – A CASE REPORT OF A COMPLEX TRACHEAL STENOSIS

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Introduction: Tracheal stenosis can derive as a complication of potential life-saving procedures such as endotracheal intubation and tracheostomy in patients with severe respiratory failure. This condition results from mucosa and cartilage damage and an exacerbated inflammatory reaction that leads to granulation tissue formation and fibrosis, with consequent circumferential stenosis. The incidence rate of post-intubation laryngotracheal stenosis reaches 10 to 22% although only 2% of patients seem to develop an important clinical presentation. In cases of complex stenosis with extensive cartilage destruction, surgical resection of affected tracheal segments is well established as the definitive and most effective method. Less invasive therapeutic approaches including bronchoscopy dilatation, laser treatment or stent placement allow for temporary symptomatic relief and may serve as an alternative, in unfit patients. Hence, we present a case of complex post-intubation tracheal stenosis and the surgical strategy employed for decisive treatment.

Case report: A previously healthy 24-year-old female from Cape Verde suffered from a car accident with resulting extensive injuries and severe brain trauma, requiring prolonged ICU stay and, mechanical ventilation support for a duration of 25 days without tracheostomy. She was discharged after a hospital stay of 60 days, showing no signs of difficulty breathing. Two months after the initial discharge, the patient presented in the emergency department with gradual onset of dyspnea and fever and was diagnosed with pneumonia. Further investigation through CT scan of the neck and thorax revealed a newly identified tracheal stenosis. The patient was transported to Portugal and admitted in our surgical center, four months after the established diagnosis. On observation, functional status was poor. The patient displayed cognitive deficits and was greatly emaciated, requiring a nasogastric feeding tube. Furthermore, she sustained recurrent bouts of stridor although generally maintaining a normal oxygen saturation past these periods. Bronchoscopy demonstrated a fixed subglottic stenosis, extensive inflammation, and drainage of purulent fluid from the left main bronchus as well as showcasing a poor response to inflatable dilatation. Surgery was proposed and carefully planned amongst Thoracic Surgery, Otorhinolaryngology and Anesthesiology. During the procedure, there was evidence of a 3 cm long stenosis, constraining the airway lumen around 2 cartilage rings below the cricoid cartilage. A resection of six tracheal rings was performed through transverse cervicotomy with end-to-end anastomosis of healthy mucosa. Successful extubation took place on the 2nd postoperative day while ICU stay was 6 days for careful surveillance. Bronchoscopy performed 1 week and 1 month after surgery, both confirmed the integrity of the anastomosis and absence of granulation tissue formation. Recovery was uneventful and the patient experienced significant clinical improvement.

Discussion: Benign tracheal stenosis most commonly arises from prolonged mechanical ventilation or tracheostomy. In cases of complex stenosis, tracheal surgery remains the preferred definitive treatment. However, it is an intrinsically challenging procedure, and a multidisciplinary surgical approach will allow for the best long-term results. This case reinforces literature evidence that tracheal resection and reconstruction can be performed safely and effectively in cases of post-intubation tracheal stenosis.

Keywords: *Tracheal stenosis. Endotracheal intubation. Mechanical ventilation. Tracheostomy. Surgery. Tracheal resection. Anastomosis.*

PE 011. A RARE ENCOUNTER: GIANT SOLITARY FIBROUS TUMOR OF THE PLEURA – CASE REPORT

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Introduction: Solitary fibrous tumor of the pleura (SFTP) is a rare mesenchymal neoplasm representing less than 5% of all pleural tumors. Although most of the cases are asymptomatic, when they reach large sizes, patients may develop non-specific respiratory symptoms such as dyspnea, cough, and chest pain. Typically presents as a homogeneous, well-defined, and noninvasive soft-tissue mass on imaging studies. Complete surgical resection is the preconized treatment. It is generally benign but nearly 30% may show malignant histological features and, consequently, a worse prognosis.
Case report: We report a case of a 56 years-old male, without significant medical history, that presented to the emergency room with chest pain with onset the night before. Additionally, the patient complained of asthenia, dry cough, and unintentional weight loss in the last month. A computed tomography (CT) scan of the chest revealed a bulky (16 × 9 × 13 cm), heterogeneous, and well-defined soft-tissue mass occupying the left pleural cavity. Magnetic resonance imaging showed no clear signs of invasion of the nearby structures. Bronchofibroscopy showed extrinsic compression of the left inferior lobar bronchus without endobronchial growth. A percutaneous CT-guided biopsy was conducted, and a histopathological examination suggested the diagnosis of SFTP without features of malignancy. The patient underwent anterolateral thoracotomy with complete resection of the tumor. The postoperative course was uneventful, and he was discharged home on the fifth postoperative day. Tumor histopathology was consistent with a high-risk SFTP and all resected margins were tumor-free. At the follow-up appointment two months after surgery, the patient remains asymptomatic and awaiting a reassessment CT scan.
Discussion: Diagnosis of SFTP may be suspected based on imaging and clinical features. However, these are unable to distinguish benign forms from malignant ones and a definitive diagnosis requires histologic confirmation. Preoperative biopsies may provide limited sampling and not accurately demonstrate histologic evidence indicative of a high risk of aggressive behavior as we have seen in this case. Complete surgical resection is not only required for accurate histopathologic evaluation but is also the cornerstone of treatment and the most important prognostic factor. The choice of surgical approach is based on tumor size and the difficulty of removing the tumor with free margins. Recurrence of SFTP is highly associated with incomplete surgical resection and/or characteristics of malignancy like high mitotic rate, presence of tumor necrosis, and tumor sizehigher than 10 cm, the last two seen in our case. Long-term follow-up is crucial to monitor for potential recurrence or metastasis. This case report highlights the importance of considering SFTP in the differential diagnosis of pleural tumors especially when imaging studies reveal lesions with the features described above. Multidisciplinary collaboration, accurate histopathological assessment, and surgical planning are essential for successful management and optimal patient outcomes.

Keywords: *Solitary fibrous tumor of the pleura. Thoracic surgery. Case report. Giant pleural tumor.*

PE 012. GIANT EMPHYSEMATOUS BULLA – A SUCCESS CASE

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Introduction: Pulmonary bullae are focal regions of emphysema, with a diameter greater than 1 cm, affecting 12% of adults. They are mainly found in a subpleural region and are typically wider at the lung apices. Sometimes, they can cause compression of adjacent lung tissue. When these bullae occupy at least one-third of the hemithorax volume, they are termed giant bullae and may mimic a pneumothorax.
Case report: The authors present the case of a 44-year-old man, a store employee, and a regular exerciser. He was a smoker with a smoking history of 30 pack-years, had an anxiety disorder, and no known respiratory diseases. He was referred to the Pulmonology consultation due to a diagnosed right apical emphysematous bulla, seen on a chest X-ray. He denied any respiratory complaints, such as dyspnea, cough, or hemoptysis, as well as constitutional symptoms like weight loss or fatigue. On physical examination, he had a slender physique, and pulmonary auscultation revealed decreased vesicular murmur in the right apex, but peripheral oxygen saturations were above 95%, with no other abnormalities. Laboratory tests, including alpha-1-antitrypsin, HIV, HCV, and HBV serologies, renal and hepatic function, thyroid function, and testosterone levels, showed no abnormalities. The chest X-ray highlighted an emphysematous bulla in the right upper lobe projecting inferiorly. Chest CT showed "bilateral emphysematous changes, mild on the left and moderate on the right, with centrilobular emphysema bullae present in both apical regions and along the posterior segment of the right upper lobe. Paraseptal emphysema bullae were more numerous on the right, some coalescing to form a larger apical bulla with approximate dimensions of 11.2 × 6.6 cm (evaluated in the coronal plane). No suspicious focal parenchymal lesions or systematized alveolar consolidation of inflammatory/infectious nature were observed bilaterally. No pleural effusion or other significant alterations." Pulmonary function tests were within normal limits. The patient started bronchodilator therapy and was proposed for surgery to resect the bulla, which was performed without complications. After quitting smoking, the patient remained asymptomatic during follow-up visits. Post-surgery chest CT showed "high-density sequelae suggesting the intervention on the dominant right apical emphysematous bulla. Bilateral paraseptal and centrilobular emphysema, with a predominance in the upper lobes. No suspicious pulmonary parenchymal nodules. No pleural effusion or other relevant alterations."
Discussion: This clinical case aims to present a successful resection of an emphysematous bulla. It is commonly associated with tobacco, cocaine, or marijuana use, but it can also be linked to alpha-1-antitrypsin deficiency, Marfan syndrome, Ehlers-Danlos syndrome, or HIV presence. Treatment options vary based on the degree of emphysema, symptoms, and concomitant conditions and include bronchodilator therapy, respiratory rehabilitation, bulla resection surgery, and lung transplantation.

Keywords: *Emphysematous bulla. Smoking habits. Volume reduction surgery.*

PE 013. PLEURAL PLAQUES – WHY WE CAN FORGET ASBESTOS

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Introduction: Asbestos are a silica-rich group of minerals which are naturally organized in microscopic fibbers, that when in contact to the respiratory system of an individual can cause a diversity of pulmonary disorders. Pleural Plaques are thickening of the pleurae, which almost universally signify exposure to asbestos. Asbestosis consists in lung fibrosis caused by exposure to asbestos. Patients exposed to asbestos have higher risk of Lung cancer mainly if the

patients are actively exposed to smoking simultaneously. Pleural Mesothelioma is a malignant neoplasm of the pleura, exclusively connected to asbestos.
Case report: Male, age 80, was a manutention technician with 30 years of exposure to asbestos, used to smoke (5 pack-year). Alcoholic consumption is mild to moderate, denies exposure to birds or other animals, without exposure to fungi. Is medicated with inhalers long acting beta2-adrenergic agonist and muscarinic antagonist. Asymptomatic and without findings in pulmonary auscultation. Spirometry without obstruction, restriction or diminished diffusion. Thoracic High Resolution Computerized Tomography observes bilateral pleural thickening, some with big calcifications, dense fibrotic striations or with other words is reporting Pleural Plaques partially calcificated and possible incipient Asbestosis.
Discussion: Even after the substitution of many equipment with asbestos in their composition, there are still remaining many points of exposure to asbestos that need removing, such as in the workplace. In order to avoid the damaging effects to the health of the world population, the exposure should be decreased as much as possible. Following the Company Managing guidelines and Protection Equipment usage, Individual or Collective, are protective measures to reduce as much as possible the exposure of the workers to this aggressive element. The high latency period until the development of lung disease is an obstacle to the diagnosis and highlights the importance of a complete and careful anamnesis.

Keywords: *Asbestos. Occupational medicine*.

PE 014. HAZARDS OF THE HOME ENVIRONMENT

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Introduction: Hypersensitivity pneumonitis is a lung disease caused by an exaggerated immune reaction to inhaled allergens, such as mold spores. This clinical case describes the condition of a 77-year-old woman, a non-smoker, retired as a clerk, seeking pulmonary care due to progressive shortness of breath during light activities and worsened productive cough at night. Clinical findings and complementary exams suggest subacute hypersensitivity pneumonitis.
Case report: The patient, a 77-year-old woman, sought medical attention due to progressive shortness of breath during light activities and a productive cough that worsened at night. She had no history of smoking and presented as clinically stable during the physical examination, with no detectable abnormalities. The initial investigation included a chest computed tomography (CT) scan, which revealed the presence of rare centrilobular ground-glass nodules in the upper lobes. Arterial blood gas analysis did not show respiratory insufficiency, and bronchofibroscopy did not reveal macroscopic changes. However, bronchoalveolar lavage showed lymphocytosis, with 82% lymphocytes and an elevated CD4/CD8 ratio of 7.73, suggesting an inflammatory process. Cytological analysis of the lavage did not reveal neoplastic cells, and microbiological exams were negative. However, blood analysis revealed elevated precipitins for Aspergillus, with a concentration of 71.6 mg/dL. Autoimmunity tests and angiotensin converting enzyme (ACE) levels were within normal limits. After a careful analysis of symptoms and complementary exams, the diagnosis of subacute hypersensitivity pneumonitis was considered, due to the association between exposure to mold in the domestic environment (specifically in the patient's bedroom) and the presence of precipitins for Aspergillus in peripheral blood.
Discussion: This clinical case illustrates hypersensitivity pneumonitis in an elderly non-smoking female exposed to mold in her home, specifically in her bedroom. The disease manifested as progressive shortness of breath and nocturnal cough (likely due to mold exposure occurring at night), with radiological and bronchoscopic findings consistent with the clinical picture. The elevated lymphocytosis in the bronchoalveolar lavage and increased precipitins for *Aspergillus* were consistent with the diagnosis of hypersensitivity pneumonitis. Treatment was initiated with guidance to avoid exposure to mold and other inhaled allergens, along with corticosteroid therapy to reduce the exaggerated inflammatory response. The patient showed gradual improvement in respiratory symptoms, and follow-up radiological exams demonstrated reduction in pulmonary changes. This case emphasizes the importance of considering hypersensitivity pneumonitis in patients with atypical respiratory symptoms and exposure to environmental allergens. Early diagnosis and appropriate treatment can lead to significant improvement in the patient's quality of life and prevent long-term complications. It is essential for healthcare professionals to be aware of this diagnostic possibility, to consider it during the evaluation of patients with interstitial lung disease, and especially to inquire about the patient's environmental exposures.

Keywords: *Hypersensitivity pneumonitis.* Aspergillus. *Exposure.*

PE 015. DIFFUSE ALVEOLAR HEMORRHAGE

Susana Almeida, Ana Nascimento, Ângela Paredes Ferreira, António Fernandes, Daniela Salgueiro, Marta Batoca Sousa, Miguel Reis Costa, Nuno Pardal, Rita Vilar Mota, Rita Oliveira

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Introduction: Diffuse alveolar hemorrhage (DAH) is a syndrome characterized by intra-alveolar bleeding originating from the alveolar capillaries, resulting from the rupture of the alveolar-capillary basement membrane. It is caused by injury or inflammation of the arterioles, venules, or capillaries of the alveolar septum (alveolar or interstitial wall). Three different histopathological patterns can be observed: pulmonary capillaritis, bland pulmonary hemorrhage, and diffuse alveolar damage. Hemoptysis is the most frequent symptom; however, it is not always present, even when the hemorrhage is severe. It can present with anemia, diffuse pulmonary infiltrates on chest radiography, and respiratory failure. Treatment should be directed at the underlying etiology of DAH.
Case report: A 43-year-old man, with no relevant medical history, presented to the Urgent Care due to arthralgia persisting for over a year, with the addition of myalgia and a 17.6% weight loss in the past 2 months. He reported hemoptysis for about 2 weeks, accompanied by dyspnea and chest pain. On physical examination, fine inspiratory crackles were heard on the right hemithorax, and his tympanic temperature was 37.2 ºC. Laboratory tests showed normocytic and normochromic anemia (Hb 11.2 g/dL), elevated C-reactive protein (5.05 mg/dL), and erythrocyte sedimentation rate (81 mm/h), hyponatremia (133 mmol/L), elevated d-dimers (1,914 ng/mL FEU), slightly prolonged prothrombin time (14.2 s) and increased INR (1.23), type 1 respiratory failure (pO2 56 mmHg), urine analysis with traces of hemoglobin and proteinuria (30 mg/dL), and positive Anti-PR3 ANCA. Chest radiography revealed bilateral diffuse alveolar infiltrates, more pronounced on the right side, consistent with diffuse alveolar hemorrhage on chest CT scan.
Discussion: Therapy with induction of remission using prednisolone and rituximab was initiated, leading to clinical improvement and normalization of laboratory parameters. It is important to emphasize the significance of ANCA-associated vasculitis as a possible cause of DAH, as early initiation of induction therapy is associated with improved survival.

Keywords: *Diffuse alveolar hemorrhage. ANCA vasculitis.*

PE 016. ACUTE PULMONARY THROMBOEMBOLISM AS THE FIRST MANIFESTATION OF PRIMARY ANTIPHOSPHOLIPID SYNDROME (APS)

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Introduction: Antiphospholipid syndrome (APS) is an autoimmune disease, characterized by thrombosis (arterial, venous or vasculopathy) and gestational morbidity, accompanied by elevated titers of antiphospholipid antibodies (AAF), such as anticardiolipin antibody and/or anti-beta 2-glycoprotein I and/or by lupus anticoagulant (LAC) positivity. Pulmonary thromboembolism (PTE) is one of the most serious manifestations of APS and occasionally may be the first clinical presentation of the disease.
Case report: A 63-year-old man, non-smoker, with a history of pulmonary tuberculosis and chronic venous insufficiency of the lower limbs. He was referred to a pulmonology consultation after hospitalization for acute pulmonary thromboembolism. Due to the absence of an identifiable risk factor, he was discharged from the hospital ward with Edoxaban. An expanded thrombophilia study was requested at the consultation, with evidence of increased factor VIII and positive lupus anticoagulant (confirmed 12 weeks later). The autoimmune study was negative and the VQ scintigraphy was favorable for the presence of total pulmonary reperfusion. Given the presumptive diagnosis of APS, the patient was referred to the autoimmune disease consultation. Six months after referral the patient was admitted with a diagnosis of ischemic stroke and discharged on acetylsalicylic acid. After multidisciplinary meeting discussion, given the clinical criteria of 2 thrombotic events (venous and arterial) and laboratory criteria, the patient was diagnosed with APS and started on anticoagulant therapy with warfarin.
Discussion: In the absence of a transient or reversible risk factor, the study of thrombophilias should be performed when assessing the risk of recurrence of venous thromboembolism after an acute pulmonary embolism. Early detection of antiphospholipid antibodies may allow appropriate treatment and prevention of recurrent thrombotic complications. Awareness of this clinical association is critical for effective management and improved clinical outcomes.

Keywords: *Pulmonary embolism. Antiphospholipid syndrome.*

PE 017. DIFFUSE ALVEOLAR HEMORRHAGE A RARE COMPLICATION OF CANNABINOID ABUSE

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Introduction: Diffuse alveolar hemorrhage (DAH) is due to disruption of the alveolar-capillary basement membrane. It's a serious and life-threatening disease. Illicit drug use are among the different etiologies of DAH, being cocaine abuse the most frequently described, although there are few cases in the literature associated with cannabinoids abuse. The authors present the actual case to review the approach to DAH with particular focus on an etiology not commonly described.
Case report: We hereby report a men with 35 years old, an oven demolisher who commonly used individual protective equipment while working. For the last 15 years he has been a consumer of 10 to 20 hashish cigars on a daily basis without other toxic expose or relevant diseases. For 4 days he presented a pleuritic thoracic pain and hemoptysis (1-2 spoons of reddish blood with some clots). He denied dyspnea, asthenia, fever and other systemic symptoms. At the Urgency Room he was with normal blood pressure, normocardic, without alterations on lung auscultation and without blood gas alterations. Chest CT showed bilateral dense consolidations suggestive of hemorrhage. It was performed bronchoscopy with bronchoalveolar lavage (BAL) that confirmed the presence of bloody secretions, with sequential BAL revealing progressive bloody aliquots, supporting DAH diagnosis. The microbiologic, autoimmunity, echocardiogram and respiratory virus panel were normal. It was started aminocaproic acid 3g 8/8H without the need of corticotherapy. There wasn't recrudescence of hemoptysis. It was assumed that the DAH resulted from an important consumption of hashish.
Discussion: With this case report, the authors pretend to alert for the importance of taking into account the toxic habits when investigating the different etiologies, in particular DAH. The clinical presentation is important in diagnosing DAH but bronchoscopy with BAL is the gold standard for DAH diagnosis. The present case describes the association between cannabinoids abuse and DAH, despite the most frequent complications are pneumomediastinum, subcutaneous emphysema, pneumothorax, and pulmonary aspergillosis. With the global increased consumption of cannabinoids and their derivates, and the existence of non-criminalizing laws we are aware of the increasing atypical adverse reactions related with the intake of this drugs, being DAH one of those.

Keywords: *Diffuse alveolar hemorrhage. Cannabinoids. Hashish.*

PE 018. HYPERVENTILATION SYNDROME – AN EXTRAPULMONARY CAUSE OF HYPOCAPNIA

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Introduction: Hypocapnia is associated with multiple pulmonary and less frequently extrapulmonary causes. It occurs mainly in association with hyperventilation, which can be acute, as in cases of pneumothorax, pulmonary thromboembolism, pneumonia, asthma/COPD exacerbation; or intermittent/episodic which includes extrapulmonary causes such as heart failure, angina, pain, hyperthyroidism or hyperventilation syndrome.
Case report: 74-year-old woman, with a previous history of asthma, unresectable stage III-B thymic carcinoma (T4N0M0), submitted to radiotherapy (terminated 8 months before admission) and chemotherapy (terminated 3 months before admission), post-deep vein thrombosis status (three years before admission), fibromyalgia and anxiety. She was admitted at the Emergency Department due to dyspnea, wheezing, tiredness and cough with mucopurulent sputum with a week of evolution. On admission, she was hemodynamically stable, polypneic (RR 30-35 cpm), SpO2 96% (FiO2 21%), scattered wheezing on pulmonary auscultation. Gasometry showed uncompensated respiratory alkalosis and associated hypokalemia (pH: 7.65; PaCO2: 22 mmHg; PaO2: 77 mmHg; HCO3: 26 mmol/L; K+ 3.0 mEq). Analytical evaluation presented without elevation of inflammatory parameters. The patient underwent chest angio-CT, which showed areas of ground-glass opacity in the medial aspect of both lungs and discrete micronodular and tree-in-bud outlines in the left lower lobe, showing radiation pneumonitis, with no evidence of progression of the neoplastic disease, without pulmonary thromboembolism. Due to the presented symptoms and infectious suspicion, the diagnoses of asthma exacerbated by acute tracheobronchitis and radical pneumonitis were assumed. She underwent antibiotic therapy, initially with amoxicillin/clavulanic acid and azithromycin, which, due to the isolation of *Pseudomonas aeruginosa* in sputum, was escalated to piperacillin/tazobactam. She also underwent corticosteroid therapy, oxygen therapy for respiratory failure in the first 5 days of hospitalization and CPAP. She also performed potassium replacement due to hypokalemia. On the 15th day of hospitalization, despite no longer presenting changes on pulmonary auscul-

tation and no analytical worsening, she maintained polypnea, respiratory alkalemia, hypocapnia (PaCO2: 15-20 mmHg) and hypokalemia (K+ 2.9-3.1 mEq/ L) requiring daily potassium replacement. Considering the optimized treatment from the respiratory point of view, she underwent a cranioencephalic CT to exclude a central etiology, which did not show alterations. Endocrinological, cardiac, upper airway and neurological alterations were excluded. After extensive exclusion of organic causes and taking into account the associated anxiety, she was observed by Psychiatry, with optimization of antidepressant and anxiolytic therapy. She also initiated psychological therapy, which lead to hyperventilation improvement with resolution of hypocapnia and hypokalemia.
Discussion: This is a case of hyperventilation syndrome, a diagnosis difficult to achieve. The persistence of difficult-to-manage polypnea, respiratory alkalemia and hypokalaemia, even after control of the underlying pulmonary pathology and exclusion of other causes, led to this diagnosis, that is undervalued in Pulmonology. This syndrome usually occurs in patients with predisposing psychological factors (anxiety, depression) potentiated by stressful situations, due to hyperreactivity of the brainstem reticular activation system, culminating in lack of ventilatory control, hypocapnia, alkalemia and, consequently, hypokalemia, which can lead to fatal consequences when undiagnosed. Treatment is essentially based on ventilatory control with cognitive-behavioral therapy, use of benzodiazepines and antidepressants.

Keywords: *Hypocapnia. Hyperventilation. Respiratory alkalemia. Radical pneumonitis.*

PE 019. SEVERITY CLASSIFICATION OF RESTRICTIVE VENTILATORY CHANGES BY FEV1 VERSUS TLC Z-SCORE

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Introduction: Restrictive-type pulmonary ventilatory disorders comprise a range of thoracic pathologies, divided into intrinsic and extrinsic causes. Its diagnosis is based on the use of plethysmography, which defines restrictive ventilatory abnormality as a decrease in the total lung capacity (TLC) below the lower limit of normality (LIN < 5th percentile) compared to the 2012 Global Lung Function Initiative (GLI) reference equations for lung volumes. Since 2022, its severity has been defined according to the z-score, expressed in standard deviations. Currently, the z-score relative to FEV1 is used to define the severity of ventilatory change. However, the use of the TLC z-score for this same classification is under discussion in countries where the GLI reference equations for lung volumes are approved.
Methods: Data were collected from 100 plethysmographs (between March and June 2023) showing the presence of restrictive ventilatory changes. Simple and complex restrictions that met acceptability and reproducibility criteria were included in the collection. From these 100 examinations, pediatric patients and patients without pulmonary or extrapulmonary pathology characteristic of restrictive disease were excluded. In cases where obesity was the only diagnosis justifying lung function changes, only patients with a BMI greater than 40 kg/m^2 were considered.
Results: Thus, a total of 79 examinations were analyzed and the three-level system was applied to assess the severity of ventilatory change using FEV1 and TLC z-score values. A z-score > -1.645 was considered normal, between -1.65 and -2.5 mild, between 2.5 and -4 moderate and <-4 severe. Of the 70 tests analyzed, 63 (79.7%) corresponded to intrinsic restrictions, including 51 pulmonary interstitial diseases, eight chronic fibrotic changes after COVID-19 and four cases of restrictive changes due to pulmonary tuberculosis sequelae. On the other hand, 16 (20.3%) corresponded to restrictions of extrinsic cause, with 4 patients with neuromuscular pathology, 2 with ankylosing spondylitis, 3 with thoracic spine deformities and 7 with morbid obesity. Regarding classification, there was a change in severity category in 68 (86.1%) patients, 62 (78.5%) of whom had an increase in severity when classified according to the TLC. It should be noted that in 40 of the cases, although classified as restrictive ventilatory pattern, if the classification were based on the FEV1 z-score they would have no ventilatory change (FEV1 z-score > -1.645). In these cases, taking into account the TLC z-score, 19 became mild and 21 moderate. Of the six patients with a higher classification of severity according to FEV1 z-score, three (50%) had neuromuscular disease. Although this classification is not yet a direct recommendation of the various societies, it may be an option in countries the use of GLI lung volume reference equations is approved.
Conclusions: As it is not a defining factor of a restrictive ventilatory disorder, the use of FEV1 in the classification of its severity may lead to over/underestimation. Further studies are therefore needed on the potential of using the TLC z-score to classify the severity of restrictive ventilatory changes.

Keywords: *Restrictive ventilatory alteration. Z-Score. Total lung capacity.*

PE 020. WHEN INHALATION TAKES YOUR BREATH AWAY

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Introduction: Poppers are considered a recreational drug containing alkyl nitrites and their inhalation can cause serious and even fatal effects. The toxicity associated with its consumption can result in severe methemoglobinemia, respiratory and cardiovascular failure, coma and even death. Methaemoglobin (MetHb) is a form of oxidized haemoglobin and unlike normal haemoglobin, it has no oxygen binding capacity. Methemoglobinemia is defined as a methemoglobin level > 2%. Patients with acute toxic methemoglobinemia may have severe hypoxia despite administration of supplemental oxygen.
Case report: A 22-year-old male patient with a history of hypothyroidism and bipolar affective disorder, active smoker. The patient was referred to the emergency department for progressive worsening dyspnea over 2 days. No fever, cough or chest pain. He reported consumption of the recreational drug poppers (class of inhaled nitrites) in the last 2 days, with a temporal relationship to the symptoms. On objective examination, the patient was alert and oriented, hemodynamically stable, polypneic with supraclavicular rales, with a peripheral O2 saturation of 91% under FiO2 40% by Venturi mask, on lung auscultation he had a decreased vesicular murmur bilaterally, without adventitious noises. He performed an arterial blood gas under 40% FiO2 with mild hypercapnia of 49.2, a pO2 of 115.6 and a MetHb value of 15.2%. Chest X-ray revealed no changes suggestive of pleuroparenchymal pathology. Analytically, a slight leukocytosis of 11,000 with slight neutrophilia and negative C-reactive protein. Given the clinical condition, the patient was admitted with the suspicion of acute toxic methemoglobinemia, in the context of drugs with inhaled nitrites. During the hospitalization, clinically progressed well and was discharged after 3 days, without any symptoms and with normalized MetHb values - 0.6%.
Discussion: The presentation of this clinical case aims to alert to the potential toxic effects of this recreational drug increasingly used among young people, which may be the cause of dyspnea and hypoxemia in patients. Early clinical suspicion and evaluation are essential to identify methemoglobinemia, since although it is a rare situation, with this increasing use of poppers it may become more common and even fatal.

Keywords: *Methemoglobinemia. Hypoxemia. Poppers.*

PE 021. A PARADOXICAL CASE OF BRONCHODILATOR THERAPY

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Introduction: Bronchodilators act through their direct relaxing effect on smooth muscle cells. These belong to three pharmacological classes: 2-adrenergic receptor agonists, methylxanthines (rarely used nowadays) and muscarinic or anticholinergic antagonists. In the parasympathetic motor system that regulates bronchomotor tone, stimulation of M1 and M3 receptors mediates the bronchoconstrictor effect, while stimulation of the M2 receptor antagonizes this effect, inhibiting the release of acetylcholine. Muscarinic antagonists, or inhaled anticholinergics, widely used in the treatment of obstructive pathologies, namely COPD with an antagonistic effect on the aforementioned process, generally have few side effects, most commonly dry mouth, urinary retention and headache, with rare cases of paradoxical bronchospasm of this pharmacological class of bronchodilators.
Case report: We present the clinical case of a 65-year-old male patient, former smoker 20 UMA, followed in Outpatient Pulmonology with a diagnosis of COPD GOLD 2A, medicated with LAMA for about 6 months, describing recently worsening progressive dyspnoea and tiredness. Reassessment respiratory function tests were requested for functional characterization after initiation of targeted therapy, with a significant decrease in FEV1 and FVC after administration of ipratropium bromide (approximately 500 mL in each of the parameters) compared to pre-BD values., which is why Salbutamol was administered in an attempt to return to baseline values, even observing an improvement in the baseline value after administration of SABA. In this context, inhalation therapy was changed to LABA, with clinical improvement reported by the patient himself, who is currently awaiting a reassessment appointment.
Discussion: This clinical case stands out due to the rarity of this paradoxical adverse effect, alerting us to the possible iatrogenesis of this and other pharmacological classes in general, also highlighting the importance of a specialized and optimized respiratory function laboratory for each individual patient.

Keywords: *Paradoxal bronchospasm. LABA. Iatrogeny. Respiratory function.*

PE 022. A RARE CASE OF LUNG ABSCESS BY *SERRATIA MARCESCENS*

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Introduction: Serratia marcescens is a facultative anaerobic gram-negative bacillus, currently recognized as an important opportunistic agent. The incidence of lung abscesses caused by this bacterium is very low and typically occurs in immunocompromised patients, in the presence of severe comorbidities and in a nosocomial context. A rare clinical case is presented.
Case report: A 90-year-old woman, partially dependent on activities of daily living, with a history of asthma, hypercalcemic hyperparathyroidism, stage IIIb chronic kidney disease, hypertension and dyslipidemia, went to the emergency department (ER) due to a productive cough and dyspnea with two weeks of evolution with gradual worsening, associated with fever with one day of evolution. Single episode of small amount of hemoptysis occurred in the ER. On physical examination, she was tachypneic, tachycardic, feverish (T 38.9 ºC), with peripheral oxygen saturation of 96% with inspired oxygen fraction of 21%, pulmonary auscultation with present vesicular murmur, but impaired by transmission noise. Analytically with anemia (hemoglobin 8.2 g/dL), leukocytosis (20.5 × 10^9/L) with neutrophilia (16.91 × 10^9/L), creatinine of 1.39 mg/dL and high c-reactive protein of 20.85 mg/dL. Negative serologies. Computed tomography of the chest showed a large cavitated lesion in the apico-posterior segment of the right upper lobe (6.8 × 6 cm in the largest axial axes) with a thick and irregular wall (12 mm thick) communicating with the right main bronchus at two points due to probable fistulization, with consequent atelectasis of the entire right upper lobe, and which contacts with trachea, esophagus, superior vena cava and right pulmonary artery, which remain permeable. Empiric antibiotic therapy with piperacillin/tazobactam was started. In the second sputum collection there was isolation of *Serratia marcescens* sensitive to piperacillin/tazobactam, cefotaxime, cotrimoxazole and ceftriaxone. Flexible bronchoscopy identified purulent secretions, absence of segmentation of the right upper lobe by a large cavity, which made it impossible to perform bronchoalveolar lavage. Bronchial aspirate without isolation of microorganisms and cytology compatible with an acute inflammatory process. The patient completed 12 days of piperacillin/tazobactam, then switched to third-generation cephalosporin and metronidazole, with clinical, analytical and radiological improvement.
Discussion: This case reflects a very rare situation of a community-acquired infection by *Serratia marcescens* with lung abscess its forms of manifestation. The present case serves to highlight the importance of including infection by *Serratia marcescens* in the differential diagnoses for the etiology of the lung abscess.

Keywords: Serratia marcescens. *Lung abscess. Infection.*

PE 023. LUNG ABSCESS IN A YOUNG PATIENT: THE IMPORTANCE OF A MULTIDISCIPLINARY APPROACH

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Introduction: A lung abscess is defined as an infection of the lung parenchyma, with pus or necrosis, circumscribed and generally has an indolent course. In about half of the patients, the pathogenic agent is not isolated and the treatment generally involves long term antibiotic therapy, requiring long hospital stays. About 10% of lung abscesses do not resolve with antibiotic therapy alone, requiring drainage or surgical intervention.
Case report: We bring the case of an Angolan 28-year-old woman, evacuated to Portugal in July 2022 due to thoracic endometriosis diagnosed in the context of pelviperitonitis (2018) and two episodes of right hemothorax undergoing pleural drainage in Angola (2018 and 2019). She was awaiting observation of Thoracic Surgery and Gynecology. The patient went to the Emergency Department of a University Hospital in January 2023 due to dyspnea, cough with yellow sputum and fever in the last week. Clinically, the vesicular murmur was decreased on the right hemothorax, blood test showed elevation of inflammatory parameters, chest x-ray showed opacification of the right hemithorax with ipsilateral mediastinal shift, chest CT demonstrated a complete atelectasis of the right lung due to a probable lung abscess measuring 16 × 8 × 4 cm, and chest ultrasound supported the finding of an abscess pulmonary. The patient underwent fiberoptic bronchoscopy where a decrease in the lumen of the right segmental bronchi was observed and an aspiration of bronchoalveolar lavage was performed with negative microbiological examination. The young woman was admitted to the Pulmonology ward and antibiotic therapy was started with piperacillin/tazobactam and clindamycin for 8 weeks, while participating on a respiratory rehabilitation program, with clinical and laboratory improvement but imagiological stability. Given the lack of resolution of the lung abscess with prolonged

antibiotic therapy (8 weeks), the case was discussed with Thoracic Surgery and the patient underwent a successful right pleuropneumonectomy and discharged home on the eighth postoperative day, referred to surgery consultation chest, pulmonology, respiratory rehabilitation and gynecology. The pathological anatomy revealed lung parenchyma with lymphoid follicles, scattered bronchopneumonia foci, some in pattern of organizing pneumonia; the pleura was compatible with an abscess wall without isolation of microorganisms.
Discussion: The multidisciplinary approach to lung abscess is of particular importance and the development of in-hospital protocols for approaching this pathology is crucial for patients to have the best treatment.

Keywords: *Lung abscess. Pleuropneumonectomy.*

PE 024. A LUNG AT THE KNIFE'S EDGE – AN UNUSUAL AGENT AND MANIFESTATION OF PNEUMONIA

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Introduction: *Mycobacterium lentiflavum* is a slow-growing nontuberculous mycobacterium that is most commonly associated with cases of cervical lymphadenitis in the pediatric population. Its pulmonary involvement, particularly in immunocompetent adults and as necrotizing pneumonia, is rare.
Case report: A 73-year-old man, former smoker (10 pack-years), with no known lung disease or immunosuppressive medication, is evaluated at the urgent care service for a 7-day history of symptoms following a Mediterranean cruise trip. He presents with high fever (39 ºC) associated with productive cough and right-sided posterior chest pain that did not improve after taking amoxicillin/clavulanic acid + azithromycin. On examination, there are no signs of respiratory distress, but decreased breath sounds are noted in the lower right lung. Laboratory work-up show evidence of elevated inflammatory markers with a white blood cell count of 17,870 × 10^6/L and C-reactive protein of 19.26 mg/dL. Chest imaging (CT scan) reveals extensive consolidation in the lower right lobe involving all the basal segments, with mild homolateral pleural effusion and enlarged lymph nodes at the paratracheal and subcarinal levels. In this context, the patient is admitted to the hospital and cultures are collected. He is treated empirically with piperacillin/tazobactam, and a flexible bronchoscopy is performed, revealling extrinsic compression and infiltration at the common trunk of the right basal segments in the bronchial tree. Bacteriological and cytological examination of the bronchoalveolar lavage (BAL) is negative, and the biopsies are consistent with pneumonia. On the 15th day of hospitalization, with clinical and analytical improvement, the patient is discharged with follow-up in an outpatient clinic, with ongoing results. On the 2nd day after discharge, the patient experienced recurrence of high fever (39.5 ºC) along with worsening inflammatory parameters and overlapping imaging abnormalities. Viral studies (SARS-CoV-2, viral panel, HIV) were negative, as well as cultures and autoantibodies. A repeat flexible bronchoscopy with new bacteriological and cytological examinations also yielded negative results. Further tests for acid-fast bacilli (AFB) and nucleic acid amplification test (NAAT) for *Mycobacterium tuberculosis* were negative. Due to complete destruction of the lower right lobe without possibility of recovery and lack of response to the antibiotic initiated, the patient underwent a right lower bilobectomy. The histology of the resected tissue was consistent with extensive necrotizing granulomatous disease. During hospitalization, it is revealed from the mycobacteriological examination of the bronchoalveolar lavage (BAL) obtained during the first bronchoscopy that *Mycobacterium lentiflavum* was identified. This same microorganism was again identified in the BAL from the second bronchoscopy. The proposed therapeutic regimen included Clarithromycin 500 mg every 12 hours + Moxifloxacin 400 mg once daily + Rifampicin 10 mg/kg/day + Ethambutol 15 mg/kg/day for 9 months due to ethambutol toxicity, with follow-up at the Pneumology Diagnostic Center where gradual improvement of the symptoms was observed.
Discussion: This case presents a rare pneumonia cause, as well as an uncommon presentation of infection by *Mycobacterium lentiflavum* in an immunocompetent adult. It provides further understanding of the pulmonary involvement of this poorly known agent and alerts us that when faced with a refractory course to broad-spectrum antibiotic, it is essential to consider less common etiologies, even in immunocompetent patients.

Keywords: Mycobacterium lentiflavum. *Nontuberculous micobacteria.*

PE 025. THE MANY FACES OF AIR-FLUID LEVELS – DIAGNOSTIC CHALLENGE OF INFECTED LUNG CAVITIES

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Introduction: Chest X-ray plays an essential role in the initial assessment of patients with respiratory symptoms, and therefore its proper interpretation is extremely important, with diagnostic and therapeutic implications. Air-fluid levels can be easily recognized on chest X-ray, however their interpretation can be quite challenging, as this finding can be associated with several pathologies.
Case report: We present a case of a 79-year-old male, Caucasian, ex-smoker (63 pack/year) and medical history of COPD (FEV1 21%), global respiratory failure under BiPAP for a month, pulmonary hypertension, and alcoholism in abstinence. The patient was taken to the emergency department due to moderate exertion dyspnea (mMRC 3), intermittent chest pain, and self-limited hemoptysis within the last three days. A chest X-ray is performed in posteroanterior view, in orthostatism, and in profile view, which revealed a significant air-fluid level next to the right lung base, in a close-to-cardiac margin. To better clarify the finding, a right lateral decubitus chest x-ray was performed, with gravitational horizontalization of the level. The chest CT scan confirmed the presence of an air space with slightly thickened but regular wall, with an air-fluid level, in the lower right basal lung, measuring 8 × 9 × 6 cm. There was also a consolidation in the right lower lobe, and another air-fluid level posterior to the right major fissure. Additionally, there was a relevant centrilobular and bilateral paraseptal emphysema, affecting the lung fissures. The patient was hospitalized for therapeutic course and clinical surveillance, having undergone videobronchofibroscopy, which revealed a normal bronchial tree with bloody secretions. In bronchoalveolar lavage the agent Acinetobacter baumannii was isolated. The patient evolved favorably under levofloxacin, clindamycin, and kinesitherapy, and was discharged after 15 days, with improvement in imaging findings.
Discussion: In this case we emphasize the importance of careful interpretation of air-fluid levels on chest X-rays, which in this case could suggest various diagnoses of pulmonary origin, diaphragmatic hernia, or even abdominal pathology. Emphysema is a pathological finding frequently present in patients with COPD, particularly when there is an important obstructive component of the distal airways. Fluid retention in large emphysema bulla can be misinterpreted as lung abscesses or empyema, especially when associated with a nearby consolidative component, as in this case. Retrospectively

evaluating a previous chest X-ray of the same patient, we noticed the existence of emphysema bulla in the same area. The infection resolution, with fluid-level clearance, without the need for invasive measures, is favorable for infected emphysema bulla in contiguity, as diagnosis. However, emphysema bulla usually have thin walls, and this slight thickening makes lung abscess an alternative diagnosis. It should be noted that emphysematous bulla may contain liquid in the absence of an infectious process, usually due to inadequate clearance or, rarely, due to hemorrhage. *Acinetobacter baumannii* is an aerobic Gram-negative coccobacillus commonly associated with nosocomial infections in mechanically ventilated patients. In this case, COPD, smoking and alcoholism history and ventilation therapy, were identified as risk factors.

Keywords: *Air-fluid levels. Abscess. Chest X-ray. Computed tomography. Emphysema.*

PE 026. REPEAT RESPIRATORY INFECTIONS: DIAGNOSTIC MARCH IN AN IMMUNOCOMPETENT PATIENT AND A RARE AGENT

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Introduction: Nocardiosis is an uncommon infection, of unknown prevalence in Europe, and with about 500-1,000 cases per year in the United States. It is typically an opportunistic infection, with only 1/3 of cases in immunocompetent individuals. The lungs are the primary site of infection. More than half of all lung infections spread hematogenously, often to the brain, or contiguously to adjacent structures.
Case report: A 62-year-old woman, smoker, with a history of anaphylaxis to penicillin (previous glottic edema), COPD GOLD A, mild OSAS. She presented with recurrent respiratory infections in the context of bronchiectasis in 2015-2016, without isolation of etiological agents and with good response to antibiotic therapy. In July/2022, he developed a new respiratory infection, associated with weight loss of 7 kg, objectified for 6 months, with poor improvement after clarithromycin. Imaging: "centrilobular micronodular infiltrate, bilateral cavitated nodular images, especially in the apical segment of the LSD and mediastinal adenomegalies". Bronchofibroscopy was performed with bronchoalveolar lavage, without identification of a bacteriological agent, although abundant bacterial flora was visualized. In November, due to continued coughing with mucopurulent sputum and fatigue on moderate exertion, he was treated with Levofloxacin only with self-limiting improvement and no evolutionary changes on re-evaluation chest CT. Symptomatology remained, and a new chest CT was repeated in January 2023, which showed "persistence of countless bilateral multisegmental, centriacinar and juxtobronchial micronodules, associated with brochiectasis in both apexes", so the patient was referred to home hospitalization to start intravenous antibiotic therapy with levofloxacin, with partial improvement. After discharge, in February 2023 he had a new respiratory infection and was prescribed antibiotic therapy with ciprofloxacin and azithromycin. Repeated chest CT scan showed evolution of the condition with "greater satellite exudation, coalescence of diffuse micronodularity, practically miliary and subpleural condensing foci, although cavitations were absent". BF with BAL was repeated in April, with isolation of colonies of Nocardia cyriacigeorgica. In view of the isolation, an etiologic study of immunodeficiencies was performed, which proved negative. A CT scan and transthoracic echocardiogram were performed, without alterations, and blood cultures were sterile. Thus, after discussion with the infectious diseases department, elective hospitalization was chosen to start intravenous antibiotic therapy with imipenem, cilastin and cotrimoxazole, which was followed for 20 days with good clinical response. Subsequently, due to significant clinical and imaging improvement, he was placed on oral cotrimoxazole alone, which he has maintained to date, with an indication to continue for at least 3 months.
Discussion: Correct identification of the nocardiae species is important in deciding its clinical relevance and approach. Two characteristics of nocardiosis are the ability to spread to any organ, and the tendency to relapse or progress despite appropriate therapy. Due to the relapsing nature of Nocardiosis, antibiotic therapy should be maintained for 3-6 or 6-12 months, depending on whether the patient is immunocompetent or not. Given the possibility of dissemination to other organs, exclusion of extra-pulmonary involvement is crucial for a good prognosis.

Keywords: *Pulmonary nocardiosis. Repeat infections. Immunocompetent.*

PE 027. LEGIONNAIRES USING CPAP - AN UNLIKELY COMBINATION?

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Introduction: Legionnaires' disease, a pneumonia caused by gram-negative bacilli of the Legionella genus, represent the most common clinical presentation caused by these bacteria. The severity varies from mild infections to severe pneumonias requiring invasive ventilation and potentially leading to a fatal outcome. As an agent that predominantly inhabits aquatic environments and is transmitted through aerosols, sources of aerosols (air conditioning systems, steam baths, cooling towers) are the primary vectors of human infection. Given that these aerosol-generating sources are usually located in areas with large population clusters (hotels, cruises, hospitals), Legionnaires' disease often emerges in the form of outbreaks, highlighting the importance of notification and epidemiological investigation by public health authorities. However, it is also essential to consider other possible, less common sources of infection.
Case report: A 41-year-old man, computer technician, overweight, with obstructive sleep apnea syndrome under non-invasive positive pressure ventilation through continuous positive airway pressure (CPAP) with a humidifier for 2 years. He presented to the emergency department with a 5-day history of malaise, myalgia, and progressively worsening dyspnea on exertion, as well as high fever (39 ºC) with chills, dry cough, and left scapular pleuritic chest pain in the preceding 2 days. He denied recent travel history. On examination, he was hemodynamically stable but tachycardic and polypneic, with peripheral oxygen saturation of 92%. Pulmonary auscultation revealed subcrepitant crackles in the left hemithorax, predominantly in the upper third. After admission, hypoxemia worsened, requiring high-flow oxygen therapy and admission to the intermediate care unit. Notable findings from the tests included neutrophilic leukocytosis of 15,000 × 10^6/L and elevated C-reactive protein of 42 mg/dL. Chest radiography showed extensive consolidation in the left upper lobe with air bronchogram. Empirical antibiotic therapy was initiated with amoxicillin/clavulanic acid and azithromycin. After positive urinary antigen testing for Legionella pneumophila and negative blood cultures, the antibiotic was changed to levofloxacin during the emergency department stay (which was continued for 10 days). Progressive clinical, laboratory, and imaging improvement was observed from the 3rd day of hospitalization.During the hospital stay, due to poor hygiene conditions of the CPAP equipment and suspicion, the case was reported through the National Epidemiological Surveillance System (SINAVE), leading to an epidemio-

logical investigation suggesting contamination of the CPAP's humidifier water. The consumables were replaced, and the equipment underwent complete replacement. The patient was discharged on the 12th day, clinically better and without the need for supplementary oxygen therapy.
Discussion: *Legionella pneumophila* infection is caused by inhaling aerosols from contaminated water, making epidemiological investigation crucial. Contamination of the CPAP water is a rare infection source. Therefore, this case alerts us to possible but unexpected sources of contamination and infection, particularly ventilatory devices, emphasizing the need for proper hygiene and maintenance of the equipment and its consumables.

Keywords: Legionella pneumophila. *Non-invasive ventilation. Pneumonia.*

PE 028. MEDIASTINAL MASS – UNLIKELY DIAGNOSIS OBTAINED BY EBUS-TBNA

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Introduction: Lesions in the middle mediastinum are often lymphadenopathies and, less commonly, cystic masses, vascular aneurysms, or esophageal tumors. The majority of mediastinal lymphadenopathies have a neoplastic origin (lymphoma, metastasis from lung cancer), inflammatory origin (sarcoidosis), or, less frequently, an infectious origin (tuberculosis, mononucleosis, etc.). Such infections can lead to local fibrosis and calcification even after resolution, resulting in a scar-like appearance.
Case report: A 22-year-old Brazilian woman, previously healthy, sought medical attention due to severe anterior chest pain radiating posteriorly, evolving for 1 week, worsened by dorsal decubitus, deep inspiration, and anterior chest palpation. She also reported asthenia, dysphagia with a sensation of obstruction at the thoracic level, night sweats, and fever for the past 48 hours. She had previously been treated with azithromycin and ibuprofen for suspected laryngitis but did not experience improvement. Relevant medical history includes an upper respiratory tract infection (URTI) 6 weeks prior. Chest CT scan revealed a large infracarinal mediastinal mass, solid, heterogeneous, with extension to the pulmonary hila, and coarse calcifications, measuring approximately 53 × 36 × 49 mm. Laboratory findings showed anemia (11.8 g/dL), elevated erythrocyte sedimentation rate (ESR) of 69 mm/h, eosinophilic predominant leukocytosis (19,320/L), LDH of 294 U/L, and elevated C-reactive protein (CRP) of 189 mg/dL (normal < 5). Immunoglobulins, complements, and ACE levels were normal, and serology was negative for HIV, HBV, HCV, EBV, and CMV. Bronchoscopy and endobronchial ultrasound (EBUS) were performed, revealing carina widening with slightly granulated mucosa and mild reduction in the caliber of the right lower lobar bronchus due to likely extrinsic compression. Carinal biopsy and bronchoalveolar lavage (BAL) from the middle lobar bronchus were performed. An adenopathy in the subcarinal region measuring 17 mm in its smallest axis was identified, with indistinct margins, heterogeneous, lacking a central hilar structure, and vascularized. The cytology of the adenopathy showed a lymphoplasmacytic inflammatory infiltrate, without evidence of granulomas or malignant cells; immunophenotyping showed no abnormalities, and microbiology identified *Streptococcus pyogenes* and *Cutibacterium acnes* while ruling out mycobacteria. The patient completed 24 days of targeted antibiotic therapy with cefixime and clindamycin, resulting in clinical and radiological resolution.
Discussion: Mediastinal lymphadenitis is rare in young immunocompetent adults; however, it can occur after upper respiratory tract infections (URTI). EBUS-TBNA allows for its diagnosis and identification of microbiological agents, which is crucial for successful treatment. *S. pyogenes* has been associated with mononucleosis-like syndromes, responsible for cases of mediastinal lymphadenopathies. *C. acnes* is rarely pathogenic; however, some cases of adenitis caused by this agent have been described, and studies suggest a possible association with sarcoidosis, as it is often isolated in these patients.

Keywords: *Mediastinal lymphadenitis.*

PE 029. PULMONARY ACTINOMYCOSIS AND THE DIAGNOSTIC CHALLENGE

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Introduction: Pulmonary actinomycosis is a rare condition, accounting for 15% of the *Actinomyces* spp disease burden. Its diagnosis is difficult to make and usually late, being most of the times confused with other suppurative pulmonary diseases or with malignant diseases.
Case report: The authors report the case of a 36-year-old man, active smoker (10 pack units/year), with history of generalized anxiety disorder and without previous occupational exposure or respiratory pathology. On the last 4 months, he presented cough with purulent sputum and fetid smell, unresponsive to multiple cycles of antibiotic therapy on an outpatient basis. He performed a chest computed tomography (CT) scan, which showed an area of cavitation in the left upper lobe, with air-fluid levels and a small area of associated consolidation. The patient was referred to the "Centro de Diagnóstico Pneumológico" and Pulmonary Tuberculosis was excluded with sputum and bronchoalveolar lavage culture. Due to the worsening of the complaints, he was admitted to the Pulmonology Department, with a diagnosis of Necrotizing Pneumonia, without microbiological isolation, with good evolution under antibiotic therapy with moxifloxacin, which he complied with for 21 days. Evidence of poor oral hygiene during hospitalization, having referred to his assistant dentist. After completing the treatment he returned to the ER due to fever, cough and dyspnea. Chest CT angiography was performed, which excluded pulmonary thromboembolism and confirmed extensive consolidation of the lingula and the apico-posterior segment of the left upper lobe, with air-fluid level, simple left pleural effusion and small multilobar ground-glass areas. Evolution with septic shock and severe respiratory failure, requiring aminergic support and high-flow oxygen therapy, starting empiric antibiotic therapy with imipenem and being admitted 4 days in the ICU. No microbiological isolations in blood cultures or sputum. Due to clinical and analytical improvement, the patient was again taken care of by Pulmonology, where he continued his investigation. The multidisciplinary discussion with Infectiology and Microbiology raised the suspicion of infection by less frequent anaerobic microorganisms. The patient repeated bronchofibroscopy with bronchoalveolar lavage, whose product was sent for *Actinomyces* spp PCR test. After microbiological confirmation of infection by *Actinomyces* spp, the antibiotic therapy was changed to Penicillin G, with excellent clinical, analytical and radiological response. The patient was transferred to the Home Hospitalization Unit for continuation of intravenous treatment for 6 weeks, after which he should switch to oral amoxicillin for a total of 6 to 12 months of treatment.
Discussion: Pulmonary actinomycosis usually results from aspiration of oropharyngeal secretions into the lower respiratory tract. Periodontal disease is the main risk factor. Its clinical course is typically indolent, but it can result in severe organ dysfunction

if not properly treated. This case reinforces the diagnostic difficulty of this condition, which one should be aware of, and the importance of interdisciplinary discussion of challenging clinical cases.

Keywords: *Lung. Actinomycosis. Infection.*

PE 030. NECROTIZING PNEUMONIA DUE TO *STREPTOCOCCUS CONSTELLATUS*: REGARDING AN UNUSUAL CLINICAL CASE

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Introduction: The imaging detection of lung cavitation requires an extensive differential diagnosis. Necrotizing pulmonary infection is mostly polymicrobial and can also result from secondary infection of pre-existing lung cavities, septic embolism, or direct extension from local infections. Necrotizing pneumonia is a rare but severe complication of bacterial pneumonia, associated with high mortality. *Streptococcus constellatus*, a commensal bacteria found in the oral cavity and upper airway, is rarely pathogenic but potentially relevant in individuals with multiple comorbidities. Thus, addressing these diagnostically challenging cases in clinical practice is crucial, especially concerning the usual associated risk factors and clinical manifestations of the disease, in order to improve diagnostic accuracy and provide early treatment for these patients.
Case report: A 49-year-old man with a history of intravenous drug use, periodontal disease and previous hepatitis C presented to the emergency department with left-sided pleuritic chest pain that had been ongoing for a week, accompanied by weight loss for over a month. Upon examination, the patient exhibited pale and dehydrated mucous membranes, weight loss, and tachypnea. Initial investigations upon admission revealed mild hypoxemic respiratory failure, leukocytosis (19,820/uL) with neutrophilia (88%), and elevated C-reactive protein (20.9 mg/dl). Chest computed tomography showed scattered bilateral lung consolidations, some of which were cavitary, along with left-sided lobar parenchymal consolidation and ipsilateral small pleural effusion. Septic screening was performed, and empirical antibiotic therapy was initiated. No bacterial or mycobacterial agent was isolated from bronchial secretions. Due to persistent fever and considering the patient's risk factors, the antibiotic therapy was changed, presuming septic embolism from infectious endocarditis, which was later ruled out by ultrasound examination. As the pleural effusion increased, thoracentesis was performed, draining pleural fluid suggestive of empyema (pH < 6.8, three Light's criteria). Percutaneous drainage followed by intrapleural fibrinolysis was initiated. *Streptococcus constellatus*, susceptible to multiple antibiotics, was isolated from the pleural fluid sample. A diagnosis of complicated necrotizing pneumonia with empyema was made. The patient continued directed antibiotic therapy for 6 weeks, showing sustained clinical, analytical, and radiological improvement.
Discussion: This case emphasizes the various diagnostic possibilities that can lead to constitutional symptoms associated with lung consolidation and cavitation. Despite the importance of early antibiotic therapy, investigation should continue to identify the infectious agent. *Streptococcus constellatus* is rarely pathogenic except in the presence of multiple risk factors and comorbidities. In this case, the patient exhibited several risk factors, including male gender, malnutrition, intravenous drug use, periodontal disease, and previous hepatitis C. The differential diagnosis of such cases is complex, highlighting the importance of early antibiotic therapy and control of the focus of infection to avoid delays in treatment and optimize the prognosis.

Keywords: *Necrotizing pneumonia. Empyema.* Streptococcus constellatus.

PE 031. NECROTIZING PNEUMONIA IN THE YOUNG ADULT – A CASE REPORT

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Introduction: Community-acquired Pneumonia can be caused by a variety of microbiological organism, but it's usually caused by a small set of agents: *Streptococcus pneumoniae*, *Mycoplasma pneumoniae*, *Haemophilus influenzae* or respiratory viruses. This case report illustrates that often patients don't fit exact clinical patterns as described in the literature – it is the clinicians' job to have a high degree of suspicion.
Case report: Man, 24 years old, with no known personal history of illness and a smoking habit of 6 packs/year, attended the emergency department with a hemoptoic cough lasting for 8 days, fever, left pleuritic chest pain, and asthenia for the past 5 days. On physical examination, he was eupneic at room air, normotensive, tachycardic and feverish (38 ºC) and had a peripheral oxygen saturation of 99% at room air. The pulmonary auscultation revealed no findings. The chest radiograph showed the presence of 2 circular images in the left lung base with hypotransparent contours, apparently pneumatized and the arterial blood gas analysis showed a hypoxemic respiratory failure. Blood analyzes showed a marked leukocytosis (36×10^9/L), neutrophilia (30.2×10^9/L) and an elevated CRP - 291,3 mg/L. Acid-fast bacteria were searched on sputum (negative) and a microbiological culture was done (negative). Respiratory viruses were searched (negative) as was Legionella urinary antigen (negative) and blood cultures (left pending) and then the patient was started on empirical antibiotic therapy with amoxicillin + clavulanic acid and azithromycin. To further clarify the radiograph findings, a thoracic CT-scan was done, showing: "an area of parenchymal consolidation in the segments of the left inferior lobe surrounded by areas of ground-glass densification. Inside this area, at least 3 cavitation zones can be identified, the largest having a diameter of approximately 3,5 cm. We can also identify in the right inferior lobe two nodular images with a transparent center, measuring less than 5 mm... several mediastinal lymphadenopathies". He was admitted for surveillance, having started respiratory kinesitherapy and on the 4th day of hospitalization the blood culture came back positive for *Staphylococcus aureus* and linezolid was initiated, according to antibiotic sensitivity test, maintaining coverage for possible anaerobic organisms and a possible mixed infection. HIV 1 and 2 serology was also performed (negative). An optic bronchofibroscopy was performed as soon as possible revealing generalized inflammatory findings, bronchial secretions were collected and a bronchoalveolar lavage directed to the left inferior lobe was performed. Microbiological culture of the samples came out positive for *S. aureus*. After the start of targeted antibiotic therapy, the patient improved significantly and was discharged a on the 19th day, referred to a pulmonology consultation, continuing the antibiotic regime for 4 weeks with no complications.
Discussion: *S. aureus* is a pneumonia agent often associated with nosocomial pneumonias (ICU) and/or patients with risk factors (e.g. HIV infection). However, *S. aureus* should not be overlooked as a possible community-acquired pneumonia organism even in risk free patients, particularly if nodular cavitated infiltrates are present on

chest radiograph which can represent necrotic lesions that might evolve to form abscesses or bronchopleural fistulae.

Keywords: *Necrotizing pneumonia.* Staphylococcus aureus. *Cavitation abscess.*

PE 032. CORONAVIRUS, A CLARIFIER OR CONFOUNDING ELEMENT?

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Introduction: Diffuse alveolar hemorrhage (DAH) is due to disruption of the alveolar- capillary basement membrane, and is most frequently associated with hemoptysis. The most frequent etiologies are systemic vasculitis, rheumatic diseases, certain drugs, toxins and infectious diseases. In this case we present an immunocompetent patient with coronavirus 229E who developed DAH.
Case report: The authors present the case of a 44 year old women, born in Brazil, real estate agent, non smoker, with Graves' disease taking tiamazol since 2016 (10 mg twice daily), without another relevant diseases. She had 2 doses of vaccination against COVID-19, and past infection by SARS-CoV-2 two years before the present case. The patient presented to the Emergency Department with sudden pleuritic pain, dry cough and 3 moderate hemoptysis. She denied wheezing dyspnea and fever. On physical examination was with tachycardia, normal blood pressure, and bilateral crackles on lung auscultation. Chest CT Angiography showed bilateral dense consolidations (suggestive of alveolar hemorrhage), without signs suggestive of pulmonary thromboembolism. On blood analysis there was a neutrophilic leucocytosis, D-dimers increase, and high levels of thyroid hormone. The rest of the study (hemogram, renal function, autoimmunity, complement levels) was within the normal range. A molecular respiratory virus panel was performed, which came positive do coronavirus 229E. As far as therapeutics is concerned, tiamazol was suspended and the patient started corticotherapy (3 days of methylprednisolone 1 g/day followed by prednisolone 1 mg/kg/day for one week with progressive tapering over 4 weeks), with resolution of hemoptysis there was no need of broncofibroscopy, with a favorable clinical and radiologic evolution. Initially it was assumed that the DAH was an iatrogenic effect of tiamazol, but after detection of coronavirus 2293, it was presumed to be multifactorial.
Discussion: With this case description the authors intend to reinforce the importance of exploring the different etiologies of DAH, with special attention to drug interactions and infectious diseases. In literature all the cases related to antithyroid drugs are associated to positive ANCA vasculitis. There is only one report of HAD associated with coronavirus 229E. In this post pandemic era, the authors aim to demonstrate the importance of the molecular respiratory virus panel, with the acknowledgement of other coronavirus other than SARS-CoV-2 as coronavirus 229E.

Keywords: *Diffuse alveolar hemorrhage. Hemoptysis. Coronavirus.*

PE 033. DRUG HYPERSENSITIVITY SYNDROME IN A PATIENT WITH LUNG ABSCESS SECONDARY TO *STREPTOCOCCUS PNEUMONIAE*

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Introduction: A lung abscess is a circumscribed, purulent infection contained within the lung parenchyma. Lung abscess can be classified as primary (when they result from direct infection of the pulmonary parenchyma in an otherwise healthy person), or secondary (when there is a predisposing condition to infection). Treatment is based on prompt institution of an empiric antibiotic regimen followed by an adjusted one, usually with a prolonged course of therapy determined by clinical and imagiologic evolution. Some antibiotics are related with adverse effects sometimes with multisystemic involvement and potentially life-threatening, as in the case of drug rash with eosinophilia and systemic symptoms syndrome (DRESS Syndrome). The aim of this work is to report a case of lung abscess complicated by DRESS Syndrome.
Case report: The authors describe a case of a woman 47 year old, with asthma since childhood (not taking inhaled corticosteroids), smoker of 40 pack/year and probable Asthma/COPD. She presented cough for 2 days occasionally with hemoptysis, and started a short course of oral corticosteroids and antibiotics with azithromicin. She presented do the Emergency Department (ED) a month later due to persistence of cough, 4 Kg weight loss, despite resolution of hemoptysis. In the ED she was febrile and no respiratory failure was documented. On blood analysis there was a slight increase of inflammatory parameters and on chest radiograph a unilateral consolidation with cavitation assumed to be a lung abscess. Urinary antigen testing for pneumococcal pneumonia was positive and she had no isolates in hemocultures, sputum or bronchoalveolar lavage. Antibiotics was empirically started with piperacillin/tazobactam 4.5 g 6/6H, with good clinical, radiologic and laboratorial evolution till the 18th day, when the patient presented with fever and a non-pruritic erythematous maculopapular rash without lymphadenopathy, an increase in inflammatory markers and hepato-renal failure. According to DRESS diagnosis criteria (Score RegiSCAR), the patient had 3 points assuming the diagnosis of DRESS as possible. Piperacillin/tazobactam was assumed to be the culprit and was replaced for meropenem 2g 8/8H and linezolid 600 mg 12/12H, oral corticosteroids were stared (3 day methylprednisolone 550 mg/day, followed by prednisolone 1 mg/kg/day with progressive tapering for 8 weeks). On chest radiograph the cavity resolved.
Discussion: The lung abscess diagnosis depends on clinical and radiologic examination, supported by routine laboratory tests (blood analysis and microbiologic investigation) and with a variable response to antimicrobials. The authors want to reinforce the importance of adverse reactions to antimicrobial, which despite being rare, can be life-threatening. 15 to 37% of all cases of DRESS syndrome are caused by drugs, being beta-lactams account for 23% of these cases. In conclusion, a correct and timely diagnosis is crucial for prompt treatment and increase in patients' survival.

Keywords: *Lung abscess.*

PE 034. A CASE OF GIANT CELL ARTERITIS COMPLICATED WITH METHOTREXATE-INDUCED PNEUMONITIS AND *PNEUMOCYSTIS JIROVECII* PNEUMONIA

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Introduction: Interstitial pneumonitis is the most common type of methotrexate-associated pulmonary toxicity and is characterized by lymphocytic infiltration of the interstitium, with epithelial cell hyperplasia, small granulomas, and occasional eosinophilic infiltration. In advanced methotrexate pneumonitis, interstitial fibrosis with a honeycomb pattern may be seen. On the other hand, methotrexate, especially when associated with systemic corticosteroid therapy, may compromise the immune response and increase the risk of infections by opportunistic agents, such as *Pneumocystis jirovecii*. Although not frequent, overlapping of both entities can be observed.

Case report: 75-year-old Caucasian woman, autonomous in daily life activities and residing in Lisbon. With a personal history of giant cell arteritis (GCA) under corticosteroid therapy in the weaning phase and recently introduced methotrexate 15 mg/week, arterial hypertension (medicated with nifedipine 60 mg), diabetes mellitus induced by corticosteroid therapy and dyslipidemia (medicated with simvastatin 20 mg). Went to the Emergency Department due to fatigue that had lasted for several months, worsening in the previous 3 days, for minimal efforts, associated with dyspnea and productive cough with mucous sputum, having denied other systemic symptoms. On observation, she was found to be polypneic, in need of supplemental oxygen therapy with a maximum supply of 4 L/min, and on pulmonary auscultation, she had crackling fevers throughout the entire length of both hemithoraxes. Analytically, with an increase in inflammatory parameters, with leukocytosis, neutrophilia and CRP of 8.31 mg/dl, as well as an increase in LDH (966 mg/dl). Blood cultures and antigenuria were negative. Imagiologically, with evidence of bilateral reticulointerstitial infiltrate on chest X-ray, having subsequently performed chest CT, which showed the presence of subpleural reticular opacities with a bilateral and diffuse distribution, as well as thickening of the interlobular septa. Given the more likely diagnosis of methotrexate hypersensitivity pneumonia, she suspended the same and performed bronchofibroscopy with a culture of bronchoalveolar lavage, which highlighted globally hyperemic and edematous mucosa, whose lung biopsy did not allow for histopathological evaluation. After a multidisciplinary meeting and considering the clinical and imaging findings that suggested the hypothesis of hypersensitivity pneumonitis, corticosteroid therapy was increased. However, on the 7th day of hospitalization, *P. jirovecii* was isolated from the BAL, and antibiotic therapy with cotrimoxazole was associated. During hospitalization with progressive clinical and analytical improvement, with the possibility of weaning from supplemental oxygen therapy, she was discharged after 14 days of directed antibiotic therapy, with the need for corticosteroid therapy in a higher dose than the previous one, given the impossibility of maintaining corticosteroid-sparing in the time. In the reassessment chest CT, already in an outpatient setting, the patient presented complete resolution of the imaging alterations initially presented, remaining without methotrexate therapy and under prophylaxis with cotrimoxazole.
Discussion: The differential diagnosis of methotrexate-induced lung injury includes opportunistic infection, the underlying disease itself, and eventual neoplasia (eg, lymphangitic tumor or lymphoproliferative disease). In the absence of appropriate antibiotic therapy, mortality from *P. jirovecii* pneumonia is 90 to 100%, so it is imperative to include the possibility of pulmonary infection by this agent in the diagnostic process.

Keywords: *Methotrexate. Hypersensitivity pneumonia.* Pneumocystis jirovecii. *Giant cell arteritis.*

PE 035. FUNGAL PNEUMONIA OF RARE ETIOLOGY

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Case report: The authors present the case of a 74-year-old female patient, non-smoker, with a history of pulmonary tuberculosis in the previous year for which she underwent treatment, osteoporosis and dyslipidemia. She was sent to primary care consultation for complaints of cough with moderate amount of mucoid sputum, exertional dyspnea (mMRC 3). She denied fever, weight loss, anorexia, wheezing, or other complaints. On physical examination, she was eupneic on room air, without desaturation, without changes in pulmonary auscultation and without peripheral edema. A CT scan of the chest was requested, showing evidence of an area of pulmonary consolidation, with an air bronchogram in the upper segment of the right lower lobe, some opacity in the middle lobe and upper right lobe, and bilateral bronchiectasis, with some parietal thickening, but no signs of impaction. mucoid. Videobronchofibroscopy was requested with bronchoalveolar lavage, which did not show endobronchial lesions and showed only mucopurulent secretions in moderate amounts in the right bronchial tree. Microbiological examination of bronchoalveolar lavage and bronchial aspirate showed fungal isolation of an *Ochroconis galopava*. An immunodeficiency study was carried out, which was negative both for acquired immunodeficiencies and for genetic immunodeficiencies. The case was discussed with infectiology, given that the isolated agent can be pathogenic, especially in situations of associated immunosuppression. Taking into account the symptoms and structural changes in the lungs, the decision was made to value the result, with the initiation of antifungal treatment with posaconazole in a loading dose, then maintaining a dose of 300 mg per day, which should be complied with for 8 weeks, with clinical improvement.

Keywords: *Fungal pneumonia.* Ochroconis galopava.