

one month after diagnosis, he started long-term oxygen therapy because of marked desaturation in effort and hypoxemia at rest with rapid need for debt escalation. Since the beginning of September he had increased peripheral edemas. He started tadalafil and bosentan, under close supervision, along with a diuretic booster and was referred for lung transplant consultation. In this context, he was also referred for respiratory rehabilitation (RR) and started an outpatient RR program. This program proceeded to an intensive 3-week inpatient phase, after which it returned to the outpatient clinic until the date of transplantation in March/2022. The exercise program was based on aerobic training at 50% of the maximum load evaluated in cardiorespiratory stress test. He trained on a bicycle, treadmill, exercises with an arm ergometer and strength training. The evaluation of the RR program revealed an improvement in quality of life (CAMPHOR scale), functional capacity, muscle strength, dyspnea and impact on activities of daily living. He underwent a bipulmonary transplant under ECMO, uneventfully. The postoperative complications were primary graft dysfunction requiring oxygen therapy, surgically-solved iatrogenic right hemothorax, and tracheobronchial infection in the immunocompromised patient with non-resistant *Klebsiella pneumoniae*, improved after antibiotic therapy. He maintains immunosuppression with tacrolimus, mycophenolate mofetil and prednisolone, he also maintains treatments in the RR Unit. From the genetic investigation carried out by the NGS panel for PAH (Genomed, 2022) no pathogenic variant was found. The anatomopathological diagnosis of PVOD was confirmed. **Discussion:** In a case of severe precapillary PH, PVOD should be considered given its poor prognosis and reduced response to vasodilator therapy, which may even be deleterious. Urgent referral for lung transplantation is mandatory. In this case, we highlight the optimization of the clinical condition obtained with the respiratory rehabilitation program with an intensive 3-week inpatient phase.

**Keywords:** Pulmonary venoocclusive disease (PVOD). Pulmonary hypertension. Pulmonary transplant. Respiratory rehabilitation.

#### PC 053. PREVALENCE, INCIDENCE, AND FACTORS ASSOCIATED WITH CHRONIC COUGH: A SYSTEMATIC REVIEW AND META-ANALYSIS

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**Introduction:** Chronic cough (CC) is a common and disabling symptom, associated with physical and psychological effects that interfere with patients' daily activities. Previous studies showed that CC may be present in people without any underlying condition and that environmental and occupational factors increase the risk of developing CC. However, the prevalence and incidence of CC in the general population and in groups exposed to potential risk factors have been scarcely investigated. Objective: We aimed to study the prevalence and incidence of CC (productive and non-productive) in the general population and in people exposed to specific environmental (i.e., fumes, smoke, dust) or occupational (i.e., factories, farms, and mines) factors, which have shown to be associated with CC.

**Methods:** A systematic literature review was conducted (ref.: CRD42022298240) and searches were performed in CENTRAL, CINAHL Plus with Full Text, MEDLINE ALL, SCOPUS, and Web of Science. Studies were included if investigated adults with CC (>8 weeks) and reported on its prevalence/incidence or exposure to potential environmental and occupational factors. Two independent reviewers assessed the titles, abstracts and full-texts according to the eligibility criteria. Data on prevalence/incidence and exposure factors of CC were extracted. Evidence of publication bias was assessed with the Risk Of Bias In Non-randomized Studies - Exposures scale by two reviewers.

**Results:** Sixty studies were included, 59 reported on the prevalence, nine on the incidence and 46 on exposing factors related to CC. The

prevalence of productive CC in the general population was 6.3% to 13.7% (n = 5) and of non-productive CC was 0.2% to 37% (n = 11). The incidence of productive CC was 6.9% (cumulative, n = 1) and of non-productive CC varied from 6.1-34.7% (cumulative, n = 2) to 38-67% (non-cumulative, n = 1). Studies reporting factors associated to CC showed a prevalence of productive CC of 3 to 51% in the exposed group and of 1% to 20.6% in the unexposed group (n = 8). Non-productive CC showed a prevalence of 1.3% to 65.4% in the exposed group and of 0% to 69.5% in the unexposed group (n = 21). The incidence of productive CC varied from 2.2% (non-cumulative) to 9% (cumulative) in the exposed group and 1% (non-cumulative) to 6.6% (cumulative) in the unexposed group (n = 1), whilst the incidence of non-productive CC ranged from 11.3% to 70% in the exposed and from 6.3% to 49.8% in the unexposed groups (cumulative, n = 4). Factors associated with higher prevalence and incidence of CC were dusts, gases or fumes, biological and mineral dust in occupational exposures and pesticides and smoke in environmental exposures.

**Conclusions:** Chronic cough affects up to 37% of the general population. People exposed to dusts, gases or fumes, biological and mineral dust, pesticides, and smoke seem to be the most affected by CC, especially non-productive cough. Addressing these factors seems of paramount importance in the treatment of people with CC.

**Keywords:** Incidence. Prevalence. Chronic cough. Risk factors.

#### PC 054. THE IMPORTANCE OF HYPERBARIC OXYGEN THERAPY IN THE TREATMENT OF GAS EMBOLISM

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**Introduction:** Gas embolism is a rare and potentially fatal condition that results from the entry of air into circulation through direct communication with atmospheric air, favored by a pressure gradient. The most common causes are iatrogenic and include intravenous catheterization, radiologic procedures, bronchoscopy and positive pressure ventilation. In venous embolisms it is important to be alert for patients with left-to-right shunt, such as pulmonary arteriovenous malformations and patent foramen ovale, since the passage of air bubbles from the pulmonary circulation to the systemic circulation may occur with the inversion of the shunt.

**Case reports:** Case 1: A 51-year-old female, smoker (20 pack-year), with diagnosis of Rendu-Osler-Weber syndrome, presenting pulmonary arteriovenous malformations, having been submitted to percutaneous embolization. In the context of reassessment of pulmonary arteriovenous malformations, pulmonary computed tomography angiography scan (CTA scan) was performed. After performing the CTA scan, she presents paresthesia in the extremities of the upper limbs. She was eupneic with SpO<sub>2</sub> > 95% on room air and was hemodynamically stable, with no changes in the neurological examination. CTA scan images showed gas bubbles in the left subclavian vein, pulmonary artery trunk, atrium and right ventricle. Iatrogenic Air Embolism was aged upon, probably related to contrast injection. She was placed in the Trendelenburg position and supplemental oxygen was administered using non-rebreather mask. She was referred to Hyperbaric Medicine Center for hyperbaric oxygen therapy. "Table 6" (Canadian Force Diving Manual: Hyperbaric Chamber - Operation and Treatment Procedures) was applied, with resolution of symptoms at 18 meters, without complications during compression and decompression or related to hyperoxia. Case 2: A 76-year-old female, hospitalized for decompensation of psychiatric pathology, presented with left chest pain radiating to the ipsilateral upper limb with about 16h of evolution. CTA scan showed gas bubbles in the pulmonary artery trunk. Iatrogenic Air Embolism was admitted, probably related to venous punctures. A transthoracic echocardi-