

Breathtaking Job

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Abstract: *Fibrosing mediastinitis is a rare condition defined by the presence of fibrotic mediastinal infiltrates that obliterate normal fat planes. It is a significant source of morbidity and mortality, and functional limitations that are frequently responsible for work disability. This case report presents a young woman with severe fibrosing mediastinitis in palliative treatment, with a successful professional reintegration.*

Keywords: Fibrosing mediastinitis, work; pulmonary hypertension, modified Borg scale

1. Introduction

Fibrosing mediastinitis is a rare, but fatal disease with few therapeutic options [1]. It is characterized by an excessive fibrotic reaction within the mediastinum and courses with progressive pulmonary hypertension [2], being associated with an history of granulomatous disease, such as sarcoidosis, tuberculosis, or histoplasmosis [3].

The clinical manifestations are largely dependent on which structures of the mediastinum are affected [1] [4]. Dyspnea is the main symptom of fibrosing mediastinitis and scales that measure the rating of perceived exertion, such as “Modified Borg Scale” are very useful instruments. Patients with pulmonary vessel compression can develop hemoptysis due to bronchial artery hypertrophy, which is frequently observed in fibrosing mediastinitis.

The diagnosis is established based on the clinical picture and radiologic findings, with contrast-enhanced Chest CT being the most useful exam [2]. Characteristic findings on CT or MRI include soft tissue obliteration of normal mediastinal fat planes with or without encasement and invasion of adjacent structures. [4] Active infiltrative processes involving the mediastinum, particularly bronchogenic carcinoma and lymphoproliferative [4] disorders must be excluded.

The prognosis is poor with some patients having a life expectancy of less than six years, with cor pulmonale and respiratory failure being responsible for most deaths. [3]

Despite patient limitations, return to work is an option that must be considered. The six-min walk test (6MWT) is cost-effective and well-documented field test for assessing functional exercise capacity [5] and predicting cardiorespiratory fitness, being a valuable tool for the Occupational physician.

Portuguese legal framework for the promotion of health and safety at work, by the law 102/2009, b), article 45°, states the protection measures that should be adopted in relation to the occupational hazard exposure.[6] According to “Portaria n.º 71/2015, March 10th”, the Occupational physician must make a fit to work assessment, deciding about the fitness or health status of the worker to perform a particular job and stating

his final decision in a legal document, the fit for work certificate. In this certificate the Occupational physician will report if the worker is fit to work, unfit or fit subject to work modifications, deciding about the restrictions or limitations of the worker [7]. Alternative work tasks should be offered, whenever possible, in line with the limitations of the disabled workers, in order to promote their professional and social reintegration.

2. Case Report

The authors present a case of a 35-year-old Brazilian women, resident in Portugal and working as an hospital auxiliary, at the inpatient care of an orthopedic unit. Her daily tasks consisted in the mobilization of patients, provision of hygiene care and load carrying.

Since 2016 she gradually developed complaints of dyspnea and fatigue that led to the investigation were the diagnosis of fibrosing mediastinitis was made.

Contrast-enhanced chest CT revealed occlusion of the left superior pulmonary vein, with stenosis of the inferior pulmonary veins, reduction of the left upper lobe bronchial lumen and agenesis of the right pulmonary artery that lead to Pulmonary Hypertension. It was also observed a pulmonary asymmetry with a smaller right lung and a “crazy paving” pattern at the left upper lobe. Sarcoidosis, autoimmune and lymphoproliferative causes were excluded, and serological and bacteriological studies were negative.

Study of ventilatory mechanics, including pulmonary volumes (12-07-2016) showed a restrictive ventilatory pattern of mild -severity with an oxygen saturation at rest of 97%.

Pulmonary perfusion/ventilation scintigraphy (07-07-2016) showed a decreased perfusion in the right lung and upper left lobe and no change in ventilation.

The results of right catheterization (12-01-2017) were: PAP: 41 mmHg; Basal study: PCWP (upper and lower branches of the pulmonary artery): 12 mmHg; (PAP: mean pulmonary arterial pressure; PCWP: mean pulmonary artery wedge pressure);

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Despite optimal medical therapy her condition worsened over the following two years, with several episodes of hospitalization due to respiratory infections and respiratory failure.

Occupational Health exam

- Dyspnea to minimal efforts, using long term Oxygen therapy (1 L/min for minimal efforts like walking and 5 L/min for greater efforts like climbing stairs.)
- Heart failure class III, according to New York Heart Association classification;
- Physical examination was normal;
- Work certificate: "UNFIT".



Figure 1: Computed tomography (CT): Pulmonary asymmetry with right lung hypoplasia. Axial view.

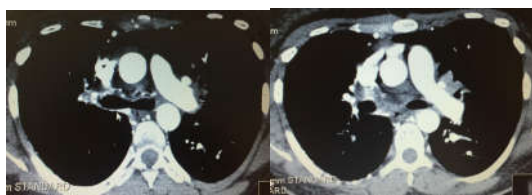


Figure 2: Computed tomography (CT): (mediastinal window) showed right pulmonary artery absence (A and B). Axial view.



Figure 3: Computed tomography (CT) chest, coronal view: Exuberant collateral circulation of the right intercostal arteries

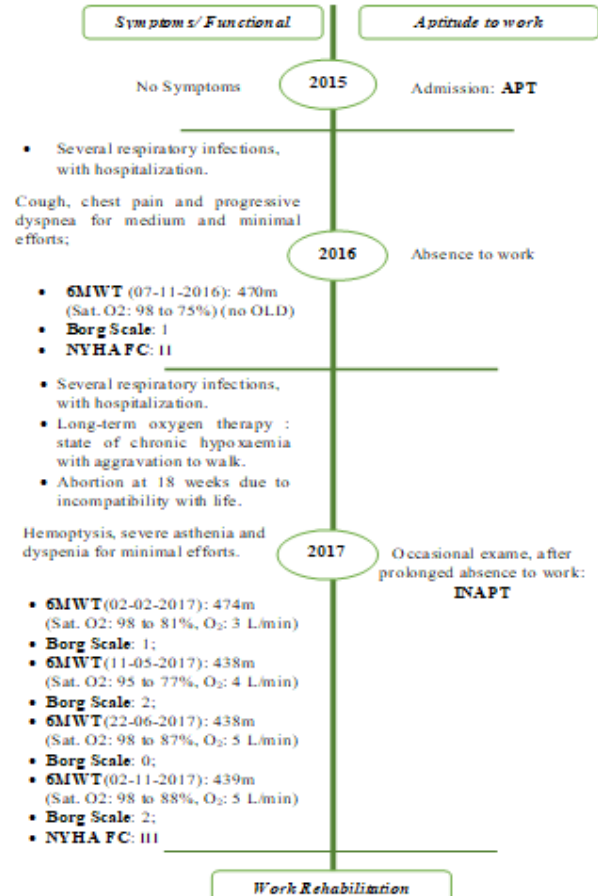


Figure 4: Progression of the functional state of the patient and her fitness for work. NYHA FC: New York Heart Association Functional Class; 6MWT- Six-min walk test; L/min: Liters/minute;

3. Discussion

The rapidly progressive worsening of the patient's functional status reflects the severity of the lung disease. Work rehabilitation in cases of severe disability, like the one presented, is one of the greatest challenges posed to the Occupational Physician, since not all employment institutions can provide adaptive solutions for disabled workers, with alternative jobs that can provide social and professional reintegration.

This is a successful case of return to work of a young disabled worker which became unfit for her previous job but could be reintegrated in the institution as a switchboard operator.

4. Conclusion

The work certificate of this worker was converted from "Unfit" to "Fit subject to work modifications": only able to perform tasks that require minimal efforts, using her long-term oxygen therapy (LTOT) equipment.

Occupational Physicians, workers and employment institutions should work together to provide independence to limited workers, avoiding precarious situations and

promoting the successful reintegration of patients. They must act following recommendations of the “World Happiness Research”: “one of the most robust findings in the economics of happiness is that unemployment is destructive to people’s wellbeing”.

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