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Case Report

# A New Diagnosis of Myasthenia Gravis in Frailty Patient Affected by Chronic Obstructive Pulmonary Disease Treated With Steroids

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**1. Key words**

Myasthenia Gravis; Corticosteroid COPD; OSAS

**2. Abstract**

In July 2017 we observed, in our Internal Medicine Department, the patient F.A. recently affected by recurrent Chronic Obstructive Pulmonary disease (COPD). Anamnesis' data have underlined the presence of Permanent Atria Fibrillation (FAP) and severe carotid stenosis, treated with carotid endarterectomises (2012). During the hospitalization period the patient used to frequently ask for a help to the medical staff because of the dyspnoea .The patient referred a high heart frequency, probably due to FAP but the presence of COPD and low saturation percentage gave us the idea of administrate intra vein corticosteroids therapy. The patient informed us an improvement of the dyspnoea. After a few days of intra-vein corticosteroid therapy the patient referred to have difficulties on doing simple movements or simple command executions such as signing an informed consent. The patient reported similar symptoms in the past described as simple asthenia but he never investigated more. In the following days the symptomatology went ingravescent and the patient reported that he "could not keep lifting his head over the neck". In the suspected neuromuscular pathology a neurologist was consulted. Our Internal Medicine Department cannot perform specific laboratory analysis (anti-receptor of acetylcholine and specific anti-kinase specific muscle) and specific medical therapy (Pyridostigmine) so the patient was transferred to the Department of Neurology in order to do Diagnostic examinations and appropriate care.

**2.1. Discussion**

The presence of co-morbidity makes struggling to evaluate the presence of subclinical diseases. In this case the administrations of corticosteroids for the treatment of COPD allowed unmasking the Myasthenia Gravis present only in the subclinical phase.

**2.2. Conclusion**

The presence of COPD can determinate an augmented cardiovascular risk in elderly patients. There are, even, some difficulties to evaluate the real presence of important, but subclinical disease, like the Myasthenia Gravis.

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## 3. Introduction

Although Evidence Based Medicine is the reference for clinical activity and scientific research, Case Report provides useful information for the advancement of scientific knowledge. The single Case Report represents the description of scientific evidence that may be undergoing to further investigation to confirm or deny the validity of the same.

Numerous scientific publications underline the existence of a correlation between respiratory disease and cardiovascular risk associated to a neuron-vegetative dystopian substrate or an ortho- and para -sympathetic system imbalance [1-4]. We report our Clinical experience of a case of ventricular fibrillation in a frailty patient with electrolytes disorder **(Table. 1)** due to gastro enteric disease.

**Table 1:** Laboratory Exams in First Aid and in the Internal Medicine Department.

| Laboratory Exams | First Aid Value | Medicine Department Value | Normal value |
|---|---|---|---|
| Ph | 7,415 | 7.310 – 7.410 | 7.384 |
| PCO2 ( mmHg) | 48.1 | 41.0 – 51.0 | 50.9 |
| PO2 (mmHg) | 63 | 80 – 105 | 104 |
| SO2 | 92% | 95 – 98% | 98% |
| WBC (/microl) | 12.080 | 4-10.000 | 11.460 |
| Glucose (mg/dl) | 127 | 70 – 110 | 113 |

## 4. Case Report

In July 2017 we observed, in our Internal Medicine Department, the patient F.A. recently affected by recurrent Chronic Obstructive Pulmonary disease (COPD). Anamnesis' data have underlined the presence of Permanent Atria Fibrillation (FAP) and severe carotid stenosis treated with carotid endarterectomises (2012).

During the visit in the Emergency Room the patient was subjected to laboratory tests (Tabe.1). After that the patient has been hospitalized. During the hospitalization period in the Emergency Room the patient has undergone/underwent to the following instrumental examinations:

- *Rx chest (07/07/2017)*: ACCENTUAZIONE DELLA TRAMA INTERSTIZIALE PREVALENTE IN SEDE BASALE. signs of COPD.
- *ECG (07/07/2017): FAP at 87 BPM.*
- *EGA ART (Tab. 1)*

The patient underwent to the following therapy:

- In emergency (07/07/2017):

- URBASON 40 mg in saline solution 250 cc IN A DAY;

- SALBUTAMOLO 100 mcgr 2 PUFF in a day.

In the Internal Medicine Department the patient is subjected to laboratory tests (Table.1):

During the hospitalization the patient underwent to the following therapy:

- URBASON 40 mg in saline solution 250 cc bis in a day;

- ceftriaxone 2 gr (intravein in saline solution) and

- klacid 500 1 cp x 2 (oral administration) for high value of WBC in COPD

- seretide 50/500 1 puff x 2 and spiriva 1 puff la sera for global bronchodilator therapy

- almarythm 1 cp x 2 and xarelto 20 1 cp ore 14 for control rhythm and anticoagulation in FAP

- lasix 25 1 cp per ipertensione arteriosa

o2 tp 3 litri minuto for support therapy

During the hospitalization period the patient has undergone to the following instrumental examinations that have shown:

- Neurological Videat (11/01/2017): At the neurological check-up the patient showed radiating hypoesthesia, localized mostly at the trunk and upper girdle musculature. In particular he referred diplopic of the horizontal gaze, fatigue on maintaining the vertical gaze to the top and all the others repeating movements of the crania musculature; difficulty on elevating the upper limb and maintaining this position. The upper limb reflexes were weak but after repeated drumming we evoked them. The muscle mass weren't sore. We recommend to do a chest C.T. with mdc, assay of acetylcholine anti-receptors antibodies, (MuSK) and to do a repeated nervous stimulation.
- elettro neurografia sensitive and motor (12/07/2017): figure. 1
- electromyography of the upper limb (12/07/2017): figure. 2
- Echocardiogram (14/07/2017): left ventricle hypertrophy. Fe 55%. Bi-atrial dilatation, not pericardical effusion.
- Chest C.T. with mdc (17/07/2017): fibrotic streak in left baseline site; Hyper plastic lymph nodes by reactive nature against the main lymph nodes hilum-mediastinal stations.

During the hospitalization period the patient used to frequently ask for a help to the medical staff because of the dyspnoea. The patient referred a high heart frequency, probably due to FAP but the presence of COPD and low saturation percentage gave us the idea to administrate intra vein corticosteroids therapy. The patient referred an improvement of the dyspnoea. After a few days

of intra-vein corticosteroid therapy the patient referred to have difficulties on doing simple movements or simple command executions such as signing an informed consent. The patient reported similar symptoms in the past described as simple asthenia but he never investigated more. In the following days the symptomatology went ingravescent and the patient reported that he "could not keep lifting his head over the neck" [5-9]. In the suspected neuro-muscular pathology a neurologist was consulted. Our Internal Medicine Department cannot performed specific laboratory analysis (anti-receptor of acetylcholine and specific anti-kinase specific muscle) therefore an anaesthesiology's vid-eat have advised us that the patient do not need a rianimatory assistance but was indicated to transfer the patient into a neurological department for specialized follow-up. In the neurological Department the patient received the specific laboratory tests end the specific medical therapy (Pyridostigmine). Actually the patient is in follow-up for COPD and has a good quality of life with a bronchodilator therapy without steroids (Glicopirronum/ Indacaterol).

## 5. Discussion

The presence of co-morbidity makes so difficult to evaluate the presence of subclinical diseases. In this case the administration of corticosteroids for the treatment of COPD has allowed unmasking the **Myasthenia Gravis** present only in the subclinical phase.

## 6. Conclusion

The presence of COPD can determinate an augmented cardiovascular risk in elderly patients. There are, even, some difficulties to evaluate the real presence of important, but subclinical disease, like the Myasthenia Gravis.

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