USE OF IL-6 RECEPTOR INHIBITOR FOR THE MANAGEMENT OF CORTICO-RESISTANT CRYPTOGENIC ORGANIZING PNEUMONIA

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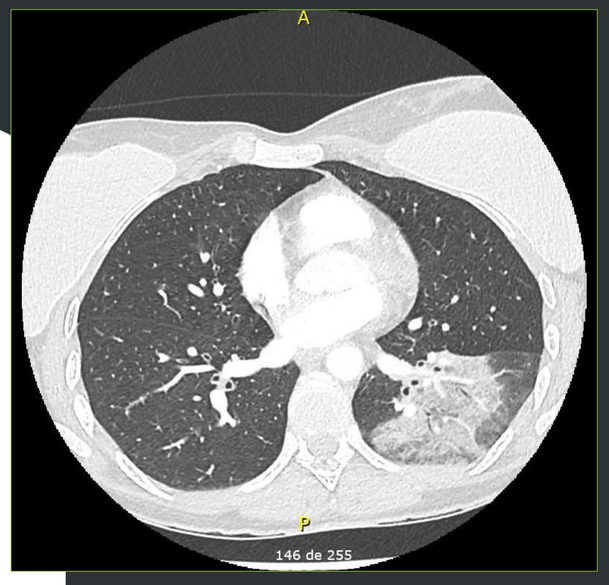
Introduction

Cryptogenic organizing pneumonia (COP) is an idiopathic diffuse interstitial lung disease caused by dysregulated alveolar fibroproliferation characterised on CT lung imaging by migrating peripheral and multifocal consolidations or ground glass opacities. When treated with corticosteroids, COP generally results in a rapid improvement of symptoms but there have been reports of corticosteroid-resistant and refractory cases of COP.

Step 1 : Dyspnea - Initial Workup

A **44-year-old woman** presenting to the emergency department with a dyspnea, dry cough and fever lasting for 3 weeks with no improvement after 2 antibiotics.
- Medical history : rheumatoid arthritis (RA) and systemic sclerosis under Rituximab > 15 years, in remission.
- Workup :
* Thoracic angio-CT scan : no pulmonary embolism but ground glass opacities in the left lower and upper lobe.
* CRP 97mg/dl – leucocytosis 10 300/mm³
* Bronchoscopy : inflammatory mucosa ; microbial pannel - ; HSV PCR + (low viral load) ; bacterial culture -

⇨ Empirical antibiotic coverage (Ceftriaxone) and antiviral therapy (Acyclovir) : no improvement. Stop after 5 days.

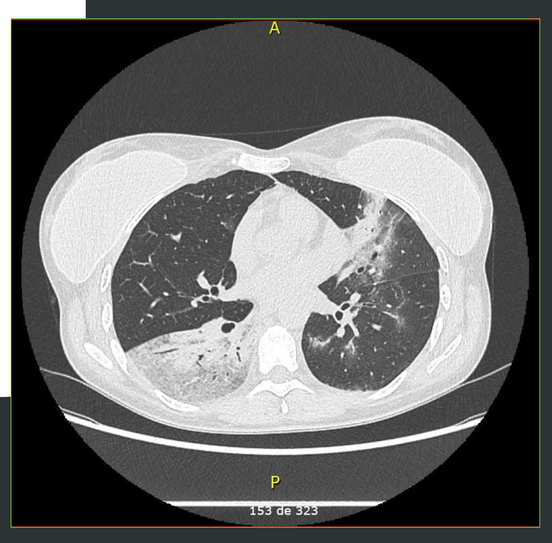


Step 2 : diagnosis of COP

- Corticosteroids (80mg methylpred IV) for suspected respiratory RA flare-up => short improvement then dyspnea worsening
- New thoracic CT scan **: migrating ground glass infiltrates** in the right upper lobe and in the left upper lobe

⇨ Diagnosis of cryptogenic organized pneumonia.

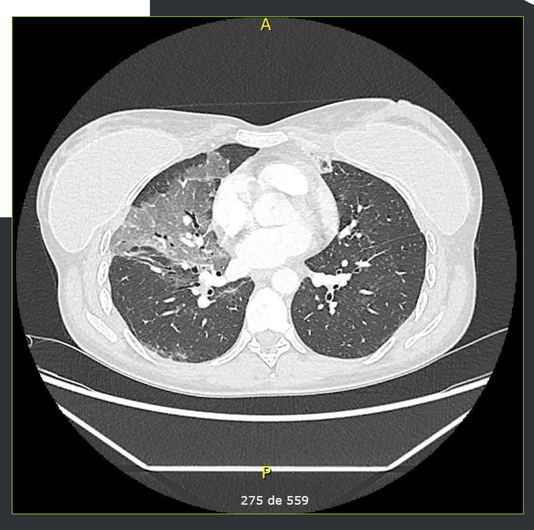
⇨ Start methylprednisolone 125mg



Step 2 bis : cortico-dependent COP

- Lack of clinican improvement under methylprednisolone 125mg
- 3 days of méthylpred. 500mg : fever stopped and cough improved.
- When tapering CS, new respiratory symptoms were noted at 80mg IV. CT scan revealed new migrating infiltrates.

⇨ Corticosteroids-dependent COP



Step 3 : consolidation therapy

- Tocilizumab (anti-Interleukine 6) was administered at the dose of 8mg/kg IV given the underlying RA and scleroderma.
- Clinical improvement 24 hours after the first dose
- Drastic decrease of serum C-reactive protein level
- Discharge of hospital a month after admission

Follow-up at 3 months

- Treatment :
  + Corticosteroids tapering until 6mg methyprednisolone/day
  +Tocilizumab 8mg/kg IV 1x/month
- Thoracic CT scan : resolution of infiltrates and areas of dense ground glass noted on previous examination
- Blood test : CRP < 1mg/dl
- Dyspnea NHYA I persistent, no cough, no fever