# GiViTI COVID19 MEETING 10.03.2020 - INTENSIVE CARE PATIENTS

**CHARACTERISTICS OF THE PATIENTS**

* Most patients are around 70 years old
* Among the most frequent comorbidities there is OBESITY
* Net prevalence in the male population
* At the P / F input <100
* X-ray picture of bilateral interstitial pneumonia (possibility of finding asymmetry in bacterial superinfection)

**Labs**

* PCT = 0 (in the absence of superinfection)
* PCR
* LDH
* Hepatic index alteration (viral ± drug treatment)
* CK especially in younger patients (who usually have higher fever, chills ...)
* Very serious glycaemic alteration with difficult control with frequent ketoacidosis
* albuminemia (seized in the lung ??)
* LYMPHOPENIA (̄ CD4)
* Normal BNP

**PHARMACOLOGICAL THERAPY**

* Lopinavir / ritonavir (KALETRA) 200/50 mg 2cp BID
* Chloroquine 500 mg BID or hydroxychloroquine 200 mg BID
* Antibiotic prophylaxis (variable depending on the center): pip / tazo, ceftriaxone, bactrim, antifungals ... (abandoned use of azithromycin)
* Acetylcysteine ​​300 mg TID (not abundant secretions but, where present, very dense)
* Steroids?  Only in case of signs of fibrosis (not early).
* Tocilizumab?  IL-6 receptor inhibitor.  Rationale given by the strong inflammatory picture MA utility to be evaluated in the light of a picture of lymphopenia.  At the moment NO routine indication and NO early use.

**RESUSCITATION THERAPY**

* Deep sedation
* Curarization (with window during supination)
* NEGATIVE water balance: the lungs are like sponges due to the process of inflammation
* Protective ventilation
  + High PEEP required, even >15cmH20 careful monitoring of possible complications (subcutaneous emphysema, PNX) or Tolerate pH up to 7.3
  + Patients usually have good compliance (unlike ARDS frameworks classics) and you can ventilate them with not high driving pressure
* PRONATION
  + From 18 to 24h
  + Fundamental Therapy Principles = extremely effective
  + Often up to 7 rotations necessary

 \*\*ATTENTION: do not trust the first improvement and follow the therapy at least until the signals of response to the therapy are observed (see weaning)

\*\*Thinking about creating a TEAM dedicated to pronation (consider the high number of patients)

**OTHER**

* Tracheotomy within 7 days to consider as a possibility of making weaning attempts earlier and with greater safety (high risk of relapses)
* CRRT?  Reserve for patients most likely to develop positively for the following reasons:
  + Increase nursing job load
  + Greater difficulties in the discussion
  + (Problem with the disposal of infected cells)
* Nitric Oxide - important results are not observed, but it can be useful to save time in the most critical patients (extreme therapy)
* ECMO (rarely necessary, because patients are very responsive to adequate ventilation therapy) indicated in case of:
  + Patient not responsive to therapy
  + Extreme hypoxemia

**MONITORING**

* Chest X-ray for definition of the framework at the entrance; repeatable but imaging not strictly related to the clinical picture
* Chest CT NOT indicated for high difficulty in transportation, high risk of spreading the contagion
* Lung Ultrasound chest is highly indicated for the daily evaluation of the lung picture
  + PATTERN 1: Diffuse B-line profile = Responds well to PEEP
  + PATTERN 2: Basal PLAPS points showing consolidation / parapnemonic effusions / atelectasis where front areas ventilated, rear areas atelectatic = responsive to pronation
  + Useful in evaluating the effect of high PEEP and managing recruitment manoeuvres
* Echocardiography: attention to dyskinesias (myocarditis?)

**WEANING**

* Indicators suggestive de-escaletion possible
* or No fever
* or ̄ clear swabs (PCR, LDH)
* or Euvolemia
* or PEEP <12cmH20
* or PaO2 / FiO2 >150
  + Fi02≤50%
* Do not trust the first improvement, because patients tend to have early relapses.
* DON'T BE FOUND UNPREPARED!