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 PaO_2 / FiO_2 >150
    - Fi02≤50%
- Do not trust the first improvement, because patients tend to have early relapses.
- DON'T BE FOUND UNPREPARED!