



## Egyptian National guidelines for COVID -19



Ministry of Health & Population

وزارة الصحة والسكان

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## 1-Corona positive asymptomatic patients

### **Lab investigations**

Complete blood picture, c-reactive protein, renal functions urea creatinine, liver functions

**(SGOT, SGPT)**

X-ray, INR , PT and PTT show no changes

### **medical management**

Oseltamivir 75 mg every 12 hrs

Ascorbic acid 500 mg every 12 hrs

Cyanocobalamin once daily as supportive measure immune boost

## 2-Corona positive fever upper respiratory tract infection mild to moderate

### **Signs and symptoms**

Respiratory rate (20 -30)

Fever above 38

Myalgia arthralgia and sore throat

Chest infection

no signs of dehydration sepsis or shortness of breathing

### **Lab investigations**

- Complete blood picture, leucopenia with lymphopenia, thrombocytopenia and agranulocytosis which is a positive sign for covid -19

\*\* we recommend it should be used as an early detection tool for covid -19

- C-reactive protein, around 12 -24 fell in that category

- Renal functions... urea mild increase which is due to relative dehydration possibly from sepsis

- Creatinine, for clinical pharmacy dosing, but no change has been observed on mild patients
- Liver functions (**SGOT, SGPT**) no changes has been suspected
- INR , PT and PTT show no changes

## Radiological

CT chest free

X-ray free signs of congestions

## medical management

- Paracetamol IV 500mg /6 hrs.
- Hydroxychloroquine 500mg/12 hrs. (with close monitoring of liver and kidney functions)

(Rationale Chloroquine has antiviral effects, which work by increasing endosomal pH resulting in impaired virus/cell fusion that requires a low ph. Chloroquine also seems to act as a zinc ionosphere, thereby allowing extra cellular zinc to enter inside the cell and inhibit viral RNA dependent RNA polymerase).

- Azithromycin 1gr first day then 500 mg per day for 3 days 1st line  
Or Clarithromycin 500 mg every 12 hrs for 7-14 days
- Oseltamivir 150 mg every 12 hrs for 5 days
- Ascorbic acid 500 mg every 12 hrs
- Cyanocobalamin IV once daily

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### 3-Corona positive with fever and lower respiratory tract infections (severe cases)

#### Signs and symptoms

Respiratory above 30 breath per min

Signs of severe respiratory distress (dyspnea, orthopnea)

Oxygen saturation (SPO<sub>2</sub>) (65-85)

#### Lab investigations

- Complete blood picture, platelets falls to (70000 per ul) , Lymphopenia less than( 7%) , agranulocytosis (75-85 ) white blood cells usually leucopenia only one case was presented with white blood cells increase
- C-reactive protein, around 30 -112 fell in that category
- Renal functions... urea increase to 85 which is due to relative dehydration possibly from sepsis
- Creatinine, for clinical pharmacy dosing, but no change has been observed on patients
- liver functions **SGOT** up to 150 , **SGPT** up to 95 has been suspected
- **INR** was relatively high around 1.6
- **ABG** shows respiratory failure type 1 and respiratory alkalosis due to dyspnea and tachypnea and the (wash)

#### radiological investigation

- Ct chest bilateral scattered patches ground glass opacities and patchy areas of consolidation with traction bronchitic changes in some cases at the periphery on all lobes.... most affected were middle and lower lobes
- X-ray bilateral ground glass appearance scattered patches of consolidation

#### medical management

- Paracetamol 500 mg IV /6 hrs
- Hydroxychloroquine 500 mg every 12 hrs
- N acetyl cysteine vial 20% IV 3 cc over 20 ml intravenous over 10 min every 6 hrs
- Meropenem 1 gr intravenous every 8 hrs
- Levofloxacin 500 mg intravenous every 24 hrs
- Oseltamivir 150 mg oral every 12 hrs for 10 days

- Vancomycin 15 mg per kg to a max dose of 1 gr over 150 ml saline at a rate of 80 ml per hr every 12 hrs
- Ascorbic 500 mg oral every 12
- Cyanocobalamin intravenous over 500 ml saline at a rate of 70 ml per hr once daily
- Magnesium sulphate 1 gram over 100 ml glucose 5 % every 12 hrs
- Aminophylline 200 mg over 100 glucose 5 % intravenous every 12 hrs (with precaution for arrhythmia)
- Enoxaparin 40 IU every 24 hrs subcutaneous  
(Rationale for recumbency as well as prophylactic as those patients seem to show signs of pulmonary embolism)
- Hydrocortisone 100 mg vial every 8 hrs acute severe pneumonia and early in ARDS
- Proton pump inhibitor 40 mg every 24 hrs
- Furosemide 20 mg every 12 hrs (Rationale coarse crepitation from pneumonia orthopnea dyspnea presented in most cases)
- Magnesium sulphate( 250 mg (5ml) over (1ml saline )) 2 ml nebulizer every 8 hrs
- Budesonide amp 500mg nebulizer every 12 hrs
- Ipratropium amp 500mg nebulizer every 6 hrs
- Saline 3 % nebulizer every 8 hrs
- Lopinavir 400mg/Ritonavir 100 mg caps 2 capsules twice daily
- Supplemental oxygen therapy initiates at 5 l per minute and titrate to reach target SPO2 more than 90 %in non-pregnant adult and SPO2 more than 92-95% in pregnant patient

#### TPN ;

- Ringer and Saline 70 ml per hr

## Complications

### 1 ARDS

Respiratory failure

Non cardiogenic Pulmonary edema (excluded by ECHO and signs of overload)

CT with lobar collapse and nodules

- mild ARDS: 201 – 300 mmHg CPAP
- moderate ARDS: 101 – 200 mmHg CPAP or mechanical ventilation
- severe ARDS:  $\leq 100$  mmHg lung protective mechanical ventilation strategy increasing peep and decreasing the volume preferably put on pressure mode ventilation

### 2 Severe sepsis

We follow surviving sepsis 1 hr bundle

Adding to our regime of antibiotics--- Antifungal fluconazole 200 – 400 mg depending on patient response intravenous daily for 7 days

Fluids saline 30 mg per kg per hr for the 1st 3 hrs or until central venous catheter shows increase to 12 mmhg

Noradrenaline as first recommendation in shock not resuscitated by fluids

## Observation

- Frequently seen hemoptysis in severe cases specially before resolution phase
- ACE inhibitors We have not seen any contra indication in the literature although there have been some debates on that matter but that was declined by the FDA and who our concern may be as it may increase cough reflex in the (hemoptysis phase )
- NSAIDs are relatively contraindicated due to salt water retention and bronchospasm



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