

TREATMENT

- nothing has been postulated officially
- Hospitalisation only for severe cases

- Supportive Treatment

- Maintain Airway, Breathing, Circulation
- Ventilation if required (\pm $PO_2 < 55\%$)
- Isolation (to prevent spread)
- Correction of electrolyte imbalance
- Correct temperature

Corticosteroids **Avoided** - Due to potential for prolonging viral replication

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DRUGS SUCH AS -

- TOCLIZUMAB (IL-6 BLOCKADE)
- ANAKINRA (IL-1 BLOCKADE)

↳ against effects of cytokine storm

- Remdesivir (in spotlight these days for its effect shown)

Lopinavir/Ritonavir (HIV Tt)

Anti-virals.
Anti-HIV drugs. } also tried

Favilavir

- Other Antimalarials also showed results.

↓
Hydroxychloroquine.

↳ less toxic derivative of chloroquine phosphate

THERE IS NO CERTAIN SPECIFIC TREATMENT PROTOCOL PUBLISHED BY WHO.

Who are affected the most / Population at more risk:

- Immuno compromised individuals
- Chronic disorders :-
 - Bronchial Asthma
 - Diabetes
 - Cardiovascular Patients. Disorder
- Old Age People > Malignancy

Spread - Droplet infection (cough & sneeze)
- Surfaces (Tables, Desks etc)

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Screening / Laboratory Analysis

- WBC count may vary Leukopenia / Leukocytosis

↓
more common.
($< 4000 / \text{mm}^3$)

- ↓ sed Lymphocyte count Lymphopenia (Most common finding)

- ↑ sed LDH levels (Due to affinity of cytokines for cardiac tissue) hepatic tissue).

- ↑ sed Ferritin level (early finding)

- ↑ sed AST ALT (Aminotransferases)

→ ↑ ESR, ↑ D-Dimer, ↑ Procalcitonin

Virus confirmed by rt PCR Technique.

Culture - not done for precaution purposes.

IMAGING - CT-CHEST

- Ground Glass Opacification w/wo consolidation
- B/L peripheral involvement esp. lower lobe

- can be found even before onset of symptoms but not specific for COVID

Pathogenesis :

- Unique feature it causes both Upper Resp Tract Infection & Lower Resp " " .
- Virus attaches to specific cellular receptors via the spike protein

↓
Transformational change, leading to fusion between the viral & cell membrane

↓
Release of nucleocapsid into the cell

↓
Alteration of DNA & production of proteins & certain specific enzymes
Transcription & Translation

↓
Alteration of cell function & production.

↓
Release of excess Cytokines & Chemokines (IL-1 β , IL-6, IL-7, IL-8, IL-9, IL-10, TNF α)
↑ Acute phase reactants (ESR \uparrow , CRP \uparrow , Procalcitonin)

Hyperinflammation

↓
Cause of Death Due to complications / effects caused by 'Cytokine Storm Syndrome'.

- Severe Acute Respiratory Distress syndrome (SARS)
- Fulminant Myocarditis (cardiac affinity)

COVID-19

Corona Virus Dx 2019

- # Family - Coronaviridae
- # ssRNA Genome

Ranges from: Common cold to Middle east Resp Syndrome
Severe acute " "

Zoonotic Disease: esp from civet cats, Camels, Bats

Incubation period: 2-12 days (Avg 5th day)

Clinical features: Range from no symptoms (asymptomatic) to severe pneumonia and death

Symptoms in Decreasing order of prevalence:

- Fever
- Dry cough
- Fatigue
- sputum production
- Shortness of Breath
- Myalgia or Arthralgia
- sore throat
- Headache
- Chills
- Nausea & vomiting
- Nasal congestion
- Diarrhoea
- Hemoptysis
- Conjunctival congestion

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Avg of 5-6
Symptoms.