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## EFFECTIVE UTILIZATION OF IMMUNOTHERAPY IN TREATMENT OF CORONAVIRUS

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### Abstract:-

The novel coronavirus ( 2019-n Cov ) is an emerging pathogen that was first described in late Decei2019 and causes a server respiratory infections in humai

Since the outbreak of COVID-19, international attention hiraised to develop treatment and control option such as tyof Immunotherapies. Corona virus causes Respiratory infection including pneumonia, cold, sneezing, and cougWhile in animal it causes diarrhoea and upper respiratory diseases.

### History and Origin :-

First case of corona virus was nolified as cold in 1960. According to the Canadian study 2001,

approximately 500 patients were identified as flu-like

system. 17-18 case of them were confirmed as

infected with corona virus strain by polymerase chain

reaction.

Corona was treated as simple non fatal virus till 2002. In 2003, various reports published with the proofs of spreading the corona to many counlries such as Unite States of America, Hong Kong, Singapore, Thailand, Vietnam and in Taiwan.

COVID-19 was first identified and isolated from pneumonia patient belong 1o Wuhan, chain.

### Introduction:-

Coronavirus are a group of related viruses that causes disease in mammals and birds. In humans coronavirus causes respiratory tract infections that can range from mild to lethal. Until recently, most people will never have heard of coronavirus but, the disease causes in humans : animals have been



Innate Immune response:-

The innate immune response is one of the two main immunological strategies found in vertebrates (the other being the adaptive immune system). The innate immune system is an older evolutionary defence strategy. Relatively speaking and it's the dominant immune system response found in plants, insects and primitive multicellular organisms.

• Pathogen recognition receptor:- The host innate immune system detects viral infections by using pattern recognition receptors ( PRRs ) to recognize pathogen-associated molecular patterns ( PAMPs ). At present, the known PRRs mainly include toll-like receptor ( TLR ), RIG-like receptor ( RLR), NOD-like receptor ( NLR ), C-type lectin-like receptor ( CLM ), and free-molecule receptor in the cytoplasm, such as cGAS, IFI302, DAI, and so on.

Adaptive immune response:- The adaptive immune system also referred as the acquired immune system, is a subsystem of the immune system that is composed of specialized cells that prevent and eliminate pathogens by preventing their growth. The acquired immune system is one of the main immunity strategies found in vertebrates (the other is the innate immune system).

Mode of spreading:- People can get the infection through contact with a person who has symptoms from the virus including cough and sneezing. Generally coronavirus was spread via airborne zoonotic droplets. Virus was replicated in ciliated epithelium that caused cellular damage and initiated infected site.

Vaccine:- Vaccine is a biological preparation that provides acquired immunity to a particular infectious disease. A vaccine typically contains an agent that resembles a disease-causing microorganism and is often made of weakened or killed forms of the microbe, its toxins, or one of its surface proteins.

Type of vaccines :-

- Live-attenuation vaccine
- Inactivated vaccine
- Subunit, recombinant, polysaccharide and conjugated vaccine
- Toxoid vaccine

Supplements:-

Important Note :- No supplements will cure or prevent disease.

With the 2019 coronavirus COVID-19 pandemic, it's especially important to understand that no supplement or other lifestyle modification other than physical distancing and proper hygiene practices can protect you from COVID-19. Your immune system consists of a complex collection of cells, processes and chemicals that constantly defend your body against invading pathogens, including toxins and

Here are 12 supplements that are known for their immune-boosting potential.

- Vitamin D
- Zinc
- Medicinal Mushrooms
- Astragalus
- Selenium
- Garlic
- Andrographis
- Licorice
- B complex vitamins
- Curcumin
- Echinacea
- Propolis

Coronavirus, **Precautions** and **strengthening** the immune system:-

Prior to this recent outbreak of the Wuhan Coronavirus. It is likely that most people had never heard of this strain of virus even though other forms have caused significant outbreaks in the past.

Coronaviruses are a group of viruses that cause disease in human and other mammals, birds, bats and reptiles. When humans are infected most forms of the virus cause mild respiratory infections but as we have seen with the infection coronavirus in rare cases a coronavirus infection can be lethal.

As of now, no vaccine has been developed for mutated for the novel coronavirus. In light of this fact, prevention appears to be the best cure available so far with coronavirus threatening to run riot in India here how you can keep yourself safe from the scourge.

#### Here are the measures you need to take to keep the virus at bay

- Avoid close contact with a person who is sick. Maintain at least a 6-foot distance from anyone who is coughing or sneezing.
- Avoid touching your eyes, nose and mouth. Stay home when you are sick.
- Cover your cough or sneeze with a tissue, then dispose of the tissue safely.
- Clean and disinfect frequently touched objects and surfaces using a regular household cleaning spray or wipe.
- Wearing a mask isn't necessary unless you are taking care of an infected person. The Centers for Disease Control and Prevention (CDC) recommends that only infected persons wear masks to prevent the spread of the virus.

#### Conclusion:-

As is evident from this systematic review, immunotherapy is an efficient therapeutic option for intervention against COVID-19 and the main methods in this regard such as using immunoglobulin and plasma therapy have improved clinical outcomes in COVID-19 infected patients.