



C-Reactive Protein Prognosis During COVID 19: Symptomatic Transmission and Clinical Manifestation

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Background: C –Reactive Elevation occurs in various diseases but, in the case of the corona, I observed that crop protein was raised and it is raised above the average value .patient died because of the C-Reactive protein Raised It is para particular type of protein that is produced by the liver; when the micro-organism enters the body and the central organ of the body, which is the liver produces the CRP protein to fight against the microorganism c reactive protein also increases when the liver is inflamed in chronic jaundice or the patient who is taking alcohol c reactive protein increases not only depends upon the microorganism that is buttered to the body but on the age it depends on creactive protein also we can find that it increases with age and we usually can find that with age it increases in the CRP protein adult commonly have raised CRP protein.C reactive is is typically an annular pentameric protein found in the blood plasma, whose circulating concentration rise in response to the inflammation. It is an acute-phase protein of hepatic origin that increases following interleukin-6 secretion by macrophages and t cells.c reactive protein's mainly physiological role is to bind to the lysophosphatidylcholine expressed on the surface of dead or

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dying cells to activate the complement system. C reactive protein top expressed in the right lobe of a liver, liver, organ system, islet of Langerhans, gall bladder, duodenum, the body of pancreas, multicellular organism, increase primary function Crp protein is calcium-binding.

Keywords: Lysophosphatidylcholine; CRP protein; T cells; calcium binding.

1. INTRODUCTION

The corona virus was there, and the first corona case was there in 2002. The coronavirus is usually the infection of the lungs in which the coronavirus spike protein gets attached to the alveoli in the presence of the proteases enzyme that is found in the human body. We can calculate the rate of the corona infection through the CRP protein, which is mainly produced by the liver in the stage of the infection to fight against the virus. These crp protein is necessary to cope with the infections. We are also telling that as the age increases, the crp protein value also increases usually the men have raised CRP value. We have calculated the graphs of the crp protein in the mortality patient and the survival patient. The whitneys methods are also used and we find that the patient who were died due to the corona infection has raised crp protein value in their blood .and we also find that we conducted the CBC test in that patient we found that they had increased neutrophils count in their blood and there also we find that they had increased WBC count and their RBC count were less, and their platlets counts were only in the thousands. We also introduced corona that iwichtakes about 14 days to start its symptoms, but normally patients start showing the symptoms 2-3 days. The virus after inhalation there is a consideration that it stays in the throat for 3-4 days, and there it produces the copies and then it enters the lungs via respiratory track. so it is always advised that whenever we feel the symptoms we should drink lots of the hot water so that the virus gets killed or it may get into the digested track through the flow of the water. , Normally, it is adviced that old people need to drink a lot of the virus. The second thing is that one needs to boost the immunity even in old ageldage through various fruits eating and various multivitamin tablets or the various antioxidants as vitamin c as it dicussed in below article. The main introduction of the corona virus is only ,in the vin India. There is Bharat biotect and the adaar poonawalas company which is producing the vaccine .normally,ormally the corona has killed attenuated v accine.Vaccine such as vaccine sputnik vaccine and covishioldetc are very useful in bringing the immunity to our body. We are also intrto how the corona spreads from person to

person and its mechanism in the person's body person and mainly in the lungs. Introduction is incomplete when we do not mention the covid warriors working 24 hours in PPE kit, and many of them died due to this virus. The hrct rate of the lungs depends if the hrct rate is more and its oxygen content is less rhen a person needs to beon the ventilator in a severe infection [1]. The HRCT rate is calculated out of the 25 through the CT SCAN.it is usually the number of the lobes of the lungs infected with this virus and how many lobes there is fibrosis happens due to the coronavirus. We also calculated the HRCT rate in the 298 patient, and we find that those having the HRCT rate more than 20 were prone to death, but the HRCT rate below 5 is considered usual and the patient can survived.

2. METHODS

2.1 Study Design

The main world is facing pandemic because of the corona virus. This virus came from famous country china. The data for covid 19 patients was designated in wuhan hospital of the china .Corona Virus was invented by the chinese people and this come threat to all countries, as the corona infection is increasing day by day. The famous chinese scientist, who were killed by their president they collected the data and analysed from 30 january 2020 to the feb 28 2020 .And they find that Crp increases in the patient who has been suffering from the severe Covid 19.All the mens and womens who was suffering from the covid 19.ALL these men and women has performed the CBC test of the blood and found that they had increases in their CRP protein as they are suffering from the lung infection and in many of the infection it is found that there is increases in crp protein value. All the men and women who was suffering from the corona virus or covid 19 and chinese scientist observed that moderate diagnosis using quantitative RT-PCR ,and the famous hospital of the wuhan,china from 1 january to 20 march 2020.The main outcomes was patients who died due to covid 19 has found increase Crp protein.The major aim for the lower the CRP protein is to lower the inflammation of the liver or the lungs so the antiinflammatory tablets are to be

used to reduce the infection of the patient and we can get or we can increase the immunity of the patient so to lower the CRP protein value in the COVID-19. We can have multivitamins tablets or the vitamin C tablets or the current research found that zinc tablets are proven to lower the infection of the corona patient. Some people consume glutathione which is a very powerful antioxidant and the immunity booster is used to treat the corona patient. Glutathione tablets not only improve the health but they also improve the liver and main function, detoxify it, and they also improve the function of the liver. The liver metabolism is increased by taking the glutathione tablets, as it provides a powerful antioxidant and immunity booster and the main glutathione is capable of preventing damage to important cellular components caused by reactive oxygen species such as free radicals, lipid peroxides, and heavy metals which can lower the immunity. Now the methods of calculating CRP protein with severe and moderate illness can be easily topographed with various mathematical techniques such as graphs, pie charts, and with this various statistical data we can easily compare the things and we can conclude the things on the bigger picture. The increase of the CRP protein was found an average 20 to 50 mg/L in a patient who has been suffering from the corona, and the main 10, 11, 12, 21, 22 elevated levels of the CRP have been observed up to the 86 percent in the severe corona patient. 10, 11, 12, 13 patient with more severe disease. The patient died we feel really sorry for them but these due to Chinese people, they all have the tendency to attack on the beautiful world. The logistic regression model was adopted to analyze the association between the disease aggravation and the related factors. The receiver operating curve was utilized to analyze the prognostic value of the CRP protein after the onset of the acute phase response, the serum CRP concentration rises rapidly [within 6-12 hours and peaks at 24-48 hours] and extensively. Concentrations above 100 mg/dl are associated with the severe stimuli such as major trauma and severe infections [sepsis]. C-reactive protein responses may be less pronounced in patients suffering from the liver disease. Elevated CRP values are nonspecific and should not be interpreted without the complete clinical history [2].

2.2 Statistical Analysis

The SPSS version was taken which is 16.0 [the famous city USA of Chicago] where various

laboratories are there where various researchers are there and there are various instruments which are very useful to conduct these experiments. Categorical variables were presented here in the laboratories of the Chicago as median [IQR] and n percent respectively. Mann-Whitney's U test and the Student's t test were used in these laboratories of the Chicago to compare the data. The CRP value areas under the receiver operating characteristics curve [AUC]. The Youden index calculated the optimal threshold [3].

3. RESULTS AND DISCUSSION

3.1 Morphology

The SARS-CoV-2 comprises of the nucleocapsid, surrounded by abundant structural protein, possesses four structural proteins [n, s, m, e], 16 nonstructural proteins and several other accessories gives the shape to the virus around RNA [-30 kb genome] surrounded by the nucleocapsid protein the envelope is lipoprotein in nature, the lipid part is host-derived into which the number of the proteins are embedded such as

SPIKE protein [s]: Helps in the accessory to the swarm compartments. Neutralising antibodies are produced against S protein are protective. It has two subunits S1 subunits possess the receptor necessary [RBD], which binds to a specific receptor in congregation compartment surface. S2 subunit facilitates virus-cell membrane fusion. Membrane glycoprotein [m] it is the most abundant structural protein, gives the shape to the virus [4].

Covering protein [e]: It is a transmembrane protein and with ion frequency motion, found in the small quantity nonstructural protein: they include several enzymes which help in the replication of the virus, e.g. R-N-A dependent polymerase, etc [5].

3.2 Pathogenesis

TRANSMISSION:

COVID-19 virus is chiefly spread via respiratory precipitations and interactions ways [6].

DRIP SPREAD

Transmission of the droplets will be located in nearby interactions within 1 meter through

around the person suffering from the corona .respiration condensation occurs hypothetically transferable for sneezing or very particular communication, nose or the conjunctiva .use of the cloths mask, or the surgical mask can prevent the transmission [7].

CONTACT TRANSMISSION

Spread of the covid 19 virus can go unswervingly by connection with diseased individuals or ramblingly;

By connection with their shells in the instantaneous situation or through items used on or by the diseased individual [eg, stethoscope or thermometer]or through fomites [inanimate objects] in the instantaneous atmosphere everywhere the diseased individual such as infected clothes respiration is, utensils, furniture, the virus can be transmitted by touching the person's mouths, nose or eyes. Frequency hand hygiene following potential contact exposure is crucial to prevent this type of transmission. use of n95 respiration to prevent this type of transmission [8].

AEROSOL TRANSMISSION

Aerosol transmission [spread of the infected droplet nuclei beyond one meter]is not documented yet. however,in specific settings in which aerosol-engendering measures be situated achieved, eg. Endotracheal intubation], aerosol transmission of the covid 19 virus may be possible. use of the N 95 IS RECOMMENDED [9].

PRE SYMPTOMATIC TRANSMISSION

A person suffering from the coronavirus does not have any symptoms or does not show any symptoms, or has not established signs and symptoms. this nonsymptomatic phase begins from the 1-3 days when the virus gains entry into the body through the respiratory tract [10].

Host cell ENTRY

Coronavirus enters the body via which i track and it targets congregation cells by the spike glycoprotein antigen with the host cell or human body cell receptor, which is an angiotensin-converting enzyme-2.this is a receptor for many viruses including the corona virus.now when the virus enters the host cell, its spike protein gets cleavage, and it breaks down and it happens due

to the host cell proteases enzyme found in the human body that is called transmembrane proteases serine now the one part of the serine binds to the ACE-2 receptor and S2 subunit which causes synthesis of viral covering with the host cell sheath. then the virus enters in the alveolar cells in the lungs and on the epithelial cells of the oral mucosa and it coronavirus is also found on the cells of the heart, kidney, endothelium, and the intestine.that is why patients with the infection of the coronavirus extrapulmonary manifestation in addition to the respiratory symptoms [11].

3.3 Development of the Ards

The leading cause of the mortality in patient with the corona is mainly the condition hypoxemic respiratory failure which can affect the in severe respirational agony syndrome [12].

3.4 Reduced Surfactants

Due to the ACE2 receptors are highly found on the alveolar cells . these cells normally causes or produces the pulmonary surfactant which helps in lowering of the surface tension in the lungs now this ACE2 receptors reduces the surface tension miserably.Now normally in the corona patient there is damage in the there is damage to the type 2 alveolar cells which causes the reduced production of the surfactant and as the surfactant is reduced there is may be alveolar collapse or alverolar shrinklage and it tends to collapse .now to prevent the cpllapse,there is muscular movement of the inspiration becomes the hyperactive,which causes the enlargement of the lungs and volume in the interstitial space [13].

3.5 Risk Factor

The chief mainly at high risk are those who is above the 60 years of the age and risk increases with the age because the immunity becomes weaker as the age increases. and many persons who is sufferings from the blood pressure or the diabetes, hyperytension,cardiac arrest chronic obstructive lung disease cerebrovascular disease, chronic kidney disease, immunosupressent andv the cancer.

3.6 Clinical Manifestation

When the corona enters the body the person feels normal for 2 days and the person shows the symptoms after 5 days but it can take upto the 14

days .normally first patient will see the sore throat and fever and some what blocked respiratory track due to the mucosa in it [14] other common symptoms include fatigue and the main symptoms include loss of smell and the loss of the taste, myalgia. Loss of the smell occurs on the onset of the respiratory indications .A person who is suffering from these symptoms should undergo the corona test as soon as possible [15].

Atypical symptoms: Particularly seen in the older patient such as fatigue, reduced alertness, reduced mobility, diarrhea ,loss of appetite, absence of the fever. many tests are negative and their crp value remains normal in range but they come positive because the virus has gained the entry and it is in the throat [16-21].

3.7 Laboratory Diagnosis

Laboratory diagnosis is necessary only in indications as per the government of India, such as patient with influenza like illness etc. asymptomatic shortest and high risk contacts of a confirmed case to be established as soon as between day 5 and day 10 of the contact.

TEST was conducted and 298 patients were enrolled ,now out of the 298 84 died due to the corona and 214 recovered. Males were in large quantities these prove that male has strong immunity .now we collected the blood of those 298 patients both who survived and those who died we find that there is increase in the WBC count and the neutrophil count and we also find that patient who died has more crp protein raised and there is low rbc count and the platelets count. the independent predictors of adverse outcomes are age neutrophils count ,platelet count etc [22-26].

4. CONCLUSION

We concluded that the patient who has been suffering from the corona more the crp value more is the mortality rate of the patient and it is based indicator to decide the severity of the patient.

CONSENT

It is not applicable.

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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