

Employment of antibody conjugated drug in treatment of novel corona virus

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Corona virus is a group of virus which indicates that they are similar, but inspite of being similar they differ from each other in different strains. It mainly causes respiratory tract disease in humans and it is a real pandemic for mammals & birds, due to their immune system is very poor to this. It basically four groups i.e. alpha, beta, gamma, and delta. In recent study on the patient suffering from this suffer from common cold to the severe symptoms likewise in SRS(Severe Acute Respiratory Syndrome) or MERS(Middle East Respiratory Syndrome).As natural selection has structured evolution of various organism and viruses too. Although viruses are not living organism if talk technically, they need a host to replicate or to live, as it can be said that they are the subject to the process of evolution. The immune system of organism like human employ a number of ways to fight with pathogens. The pathogens work is to disfunction the immune system and create more number of copies, and subsequently spread to other hosts, for example a virus is muted, that makes it more harmful or deadly for human and kills the host in few hours after invasion. The virus needs a healthy host for its survival if it kills the host before the transfection; there is a probable chance to disappear the mutation. Hence there is only one way for a host to protect themselves from the virus is to develop antibodies. In today's present scenario the pandemic COVID-19 is being devastating to whole humanity .It is being seen in study the virus attacks immune system and subsequently our immune cells are unable to form an antibody against it, and the non-cellular organism replicate inside the host body. This study will be effective in depicting the method to develop a drug in response with the antigen. In the formation of drug plasma therapy will play an important role. The antibody collected from plasma therapy will be multiplied subsequently and transferred into host body via silver cage nanoparticle. As nanoparticle is known for their specificity, so at the site of replication it will bind with the antigen and perform its activity accordingly. In continuation with this, the study also comprises to develop the memory cells in the host body, so that the virus will not affect the host in future, in taking with the consideration that virus structure changes, and that can be possible by monitoring the sequence change in virus genome in different conditions, and accordingly nullify it by doing modification. As antibody conjugated with nanoparticles emphasis in making drug very efficient about 30–35% as compared to normal drug delivery. It is mediated by nanoparticle conjugated with extracted antibody. As silver contains antiviral property and it will be very feasible to treat the disease the conjugation of antibody with nanoparticle expands its application fields and gives them with new and upgraded properties. The list or range of biomolecules can be conjugated with nanoparticles diverse from low molecular weight ligands

like folic acid to peptides like LGD & LHRD. Although it is being also wed with proteins like BSA & Antibiotics. Here in this case the production of antibodies in a large number & subsequently conjugating it with nanoparticle like silver cage nanoparticles will be effective for the virus. The aspect of this study to stop mutation that is responsible for the failure of this plasma therapy in states like Kerala, Punjab. The study also comprises the antibody production by the use of hybridoma technology, where antibody producing B-cells are immortalized by fusion with tumor cells to produce hybrid cells, also known as hybridomas .Hence, the biggest advantage of using these type of cells is that, they can produce a single type of antibody in large quantities, as they produce from a single cells that replicate into identical cells. The technique is very effective in nowadays and it is the biggest key factor in treating novel corona virus. Although as every drug requires physical trials following with clinical trials. But as the usage of nanoparticles is there is very efficient time saving drug that can devastate the virus genome and stops its replication. The advantage of monoclonal antibodies have a wide range over normal antibody, as the half life time of human antibodies last from 11-24 days only , but in comparison with mABS it has longer period of time. As half life time of mABS is more than human antibodies it will be effective for making memory cells faster in comparison with human antibodies. Currently therapy by use of mABS is largest growth area in industries with the combination of development of genetic engineering & industries. Hence this is more effective in treating the virus like corona. Basically it attacks on the replication of the virus within 10-15hrs, then after stopping the replication it starts immunizing the B-cells and the job is done. The estimation of this study to cure a corona patient within 4-5 days, taking in consideration of full isolation i.e. no entry pathogens can attack during the process. This is an aspect which can disturb the process accordingly distract the immune system subsequently. In recent study on Influenza which is very devastating virus arises every year and cause of down of immunity , that hold nanocage particles can be used to stop replication of the contagious virus that led to more than 85,000 confirmed cases globally all around 2100 deaths in a year according to WHO. As it also mutates rapidly likewise corona can be treated with silvercage nanoparticle in conjugation with antibody produced by plasma therapy & hybridoma technology.

References:

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