PROJECT TITLE:COVID-19 VACCINE ANALYSIS

Objective

To deal with COVID-19, various countries have made many efforts, including the research and development of vaccines. The purpose of this manuscript was to summarize the development, application, and problems of COVID-19 vaccines.

PROBLEM STATEMENT

A correlation study to assess the knowledge and self-expressed stigma regarding COVID-19 Outbreak among adults at selected society of Pune city.

INTRODUCATION

Coronaviruses are zoonotic. This means they first develop in animals before developing in humans. For the virus to pass from animal to humans, a person has to come into close contact with an animal that carries the infection.

Once the virus develops in people, coronaviruses can be spread from person to person through respiratory droplets. This is a technical name for the wet stuff that moves through the air when you cough or sneeze.

The viral material hangs out in these droplets and can be breathed into the respiratory tract (your windpipe and lungs), where the virus can then lead to an infection.[1]

Coronavirus disease (COVID-19) is an infectious disease caused by a newly discovered coronavirus.

The virus that causes COVID-19 is mainly transmitted through droplets generated when an infected person coughs, sneezes, or exhales. These droplets are too heavy to hang in the air, and quickly fall on floors or surfaces.

People can be infected by breathing in the virus if you are within close proximity of someone who has COVID-19, or by touching a contaminated surface and then your eyes, nose or mouth.

Most people who fall sick with COVID-19 will experience mild to moderate symptoms and recover without special treatment.[2]

Common symptoms:

- Fever.
- Tiredness.
- Dry cough.

2 MAIN MECHANISM

The design of the COVID-19 vaccines must take into account both humoral and cellular immunity. In addition, COVID-19 is mainly spread through the respiratory tract and contact, so the role of mucosal immunity in preventing viral infections should be paid more attention. The virus contains four structural proteins. They are Spike S protein, Envelope E protein, Membrane/matrix protein, and Nucleocapsid N protein. The S protein has two subsections, S1 and S2. The S protein binds to specific receptors, causing the virus

One of the most explored viral vector options is the Adenovirus (Ad), currently being used by both CanSino and Oxford/AstraZeneca. Adenovirus is common cold viruses with a double-stranded DNA genome. CanSino is using Ad type 5 (Ad5) and named the vaccine Ad5-nCoV.[22] Ad5-nCoV can encode for the full-length S protein of SARS-CoV-2. This gene is derived from the Wuhan-Hu-1 sequence of SARS-CoV-2 and is cloned into the E1- and E3-deleted Ad5 vector together with the tissue plasminogen activator signal peptide.[16] The effectiveness of this vaccine is relatively high, but the disadvantage is that it may not effective for people with recessive infectious viruses.

Many phase III studies failed because of incorrect identification of the dose that best balances safety and efficacy.[36] For example, the dosing regimen for the mRNA vaccine is still under study. The 250μg dose does not seem to have significantly higher antibody titers than the 100μg dose, but it is related to a higher proportion of serious systemic adverse events. As the researchers pointed out, carefully evaluate doses of 100 μg or lower to define the regimen that provides the most appropriate benefit-risk profile for the vaccine. In this case, another special dosage consideration is age. The immune function that declines with age may lead to a greater risk of severe COVID-19 in the elderly and lead to low vaccine responses. As observed in the influenza vaccine, is a large dose of the COVID-19 vaccine needed to protect the elderly[37] effectively? It may take some time to solve these problems.

RESEARCH METHODOLOGY

RESEARCH APPROACH

A descriptive, cross sectional study was used to assess the knowledge and self-expressed stigma regarding COVI19.

RESEARCH DESIGN

Non-experimental descriptive research is the label given to a study when a researcher cannot control, manipulate or alter the predictor variable or subjects, but instead, relies on interpretation, observation or interactions to come to a conclusion.

RESEARCH SETTING

The study will be conducted in selected areas of Pune city.

POPULATION

In this study population consist adult who are living in Pune city.

SAMPLE AND SAMPLING TECHNIQUE

In this study sample is adult from selected areas of Pune city. And non-probability Convenient Sampling Technique will be used.

SAMPLE SIZE

Total sample of 100 adults were selected.

Criteria for sample selection:

INCLUSION CRITERIA

- Adults 18-55 years
- Adults who will be present at the time of study.
- Who can read and write English or Marathi

::TEAMS

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Conclusion

The successful development of the COVID-19 vaccine concerns almost all countries and people in the world. We must do an excellent job of researching the immunogenicity and immune reactivity of the vaccines. We hope this review can help colleagues at home and abroad.