Neutralising Antibodies Against Covid-19

Why in News

Recently, a study conducted on the hospital staff in France has shown that **almost all doctors and nurses who got mild forms of Covid-19 have produced antibodies that can prevent reinfection.**

> Almost all of the staff tested had antibodies that were **capable of neutralizing the novel coronavirus.**

Key Points

- **Findings of the Study:**
  - Antibodies against novel coronavirus were detected in virtually all hospital staff, sampled 13 days after the symptoms started.
  - **Neutralising antibodies** were found in 91% of the individuals.
    - After an infection, it takes some time for the host to produce neutralising antibodies.
    - These are a type of antibody that is capable of keeping an infectious agent (for instance, a virus) from infecting a cell by neutralizing or inhibiting its biological effect.
    - An antibody is a protective protein produced by the immune system in response to the presence of a foreign substance, called an antigen.
  - The study also revealed that patients may get **protective immunity** against the virus.
- **Protective Immunity:**
  - It is a condition of developing the protection against infectious disease conferred either by the immune response generated through immunization, previous infection or by other factors.
  - Several evidence suggest that the presence of neutralising antibodies may be associated with protective immunity for Covid-19 infection.

- **Supports Serologic Testing:**
    - The study supports the use of **serologic testing** for the diagnosis of individuals who have recovered from Covid-19 infection.
        Currently, serologic response of individuals with mild forms of Covid-19 infection is poorly characterised.
    - **Serologic Tests:**
        - Serology tests are **blood-based tests** that can be used to identify whether people have been exposed to a particular pathogen by looking at their immune response.
        - It measures the amount of antibodies or proteins present in the blood when the body is responding to a specific infection.
        - These tests can also give greater detail into the prevalence of a disease in a population by identifying individuals who have developed antibodies to the virus.

Way Forward

- Currently, there's no specific treatment or vaccine for the coronavirus disease.
- The findings may help scientists better understand Covid-19, including whether people who have recovered from the coronavirus infection, particularly milder forms, develop antibodies against the virus.
- Further, there is a need of future studies to characterise the beneficial or detrimental role of specific antibodies in Covid-19 patients.

Source: TH