Monoclonal antibodies cocktail therapy

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In news- Two private hospitals in Chennai recently launched 'monoclonal antibodies cocktail' therapy for Covid-19 patients.

About the therapy-

- The antibody therapy is a **cocktail of two monoclonal antibodies – Casirivimab and Imdevimab injection** and was designed specifically to block the infectivity of SARS-CoV-2.
- When given to patients with mild symptoms in an early stage of Covid-19, it helps reduce the multiplication of the coronavirus.
- Thus it avoids worsening of the disease and the need for hospitalisation.
- The **drug is administered either through the intravenous or subcutaneous (under the skin) route, through an infusion or injection.**
- It becomes active soon after entering the body.
- **Children above the age of 12 years**, with mild symptoms can be given the drug.
- The therapy was first used to treat former United States President Donald Trump in 2020.
- Recent clinical studies have shown that antibody therapy or antibody-drug cocktail **can reduce the chance of hospitalisation by 70 per cent in patients with mild to moderate COVID-19 symptoms.**
- Monoclonal antibodies are artificially created in a laboratory by **recombinant DNA technology** and tailor-made to fight a particular disease.
- Cipla and Switzerland-based Roche have launched this

antibody cocktail in the market.

- The therapy is **most suited for "high-risk COVID-19 patients" who are within the first ten days of symptom onset** and meet any of the listed criteria.
- **Other criteria** include obesity with BMI (Body Mass Index) of more than 35; or type 1 or type 2 diabetes mellitus; or chronic kidney disease or liver disease; or currently receiving immunosuppressive treatment; or if aged above 55, have either heart disease or hypertension or chronic lung disease.
- This therapy is meant for people who are **under home isolation and do not need oxygen support,** so the cut-off level of SpO2 is about 93 per cent.
- It is **not meant for people in ICU or on ventilators** or needing any kind of oxygen support and those patients who have **anaphylaxis which could entail severe allergic reaction.**
- The therapy has been **approved by the Food & Drug Administration of the United States** and has also been **cleared by India's top drug regulator the Drugs Controller General of India (DCGI).**
- The **Central Drugs Standards Control Organisation (CDSCO)** has provided an Emergency Use Authorisation (EUA) for the antibody cocktail in India.
- **Zydus Cadila** is the only Indian company to have developed a neutralizing monoclonal antibody-based cocktail **ZRC-3308** and has sought DCGI approval for a clinical trial.