



Dexamethasone Drug

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Why in News

Recently, scientists administering the World Health Organisation's RECOVERY trial have reported that **dexamethasone reduced Covid-19 deaths in severe patients.**

Dexamethasone is a **cheap and widely available steroid drug.**

Key Points

- **Highlights of the Research:**
 - The drug was given **either orally or through an IV** (intravenous).
 - After 28 days, it had **reduced deaths by 35%** in patients who needed treatment **with breathing machines** and **by 20%** in those **only needing supplemental oxygen.**
 - The drug is **not helpful for less ill patients** and for those **who do not need respiratory support.**
 - According to the estimates, this drug can **prevent one death for every eight patients** treated while on breathing machines and **one for every 25 patients on extra oxygen alone.**
- **Drug Mechanism:**
 - **Multi-system Inflammatory State** is a Covid-19 related illness that causes **inflammation of the blood vessels** leading to **low blood pressure**, affecting the entire body as it causes a build-up of fluid in the lungs and other organs.
 - The inflammation **can be fatal** so steroids and other anti-inflammatory drugs are used to reduce it.
 - Dexamethasone is **not an anti-viral but works to modulate the immune response** of the body when confronted by a viral infection such as Covid-19.

- **Benefits:**
 - The **survival benefit is clear and large** in severe patients.
 - It is **highly affordable, easy to make, can be scaled up quickly** and **only needs a small dosage**.
 - It is a **cheaper** option than **tocilizumab**, an injectable, which is also being tested.
- **Concerns:**
 - The **WHO advises** that steroids **should not be used early in a course of illness** because they **can slow the time until patients clear the virus**.
 - **Excessive use** of steroids can lead to **adverse reactions** like major mood swings, aggression and irritability, delusions, kidney/liver damage, increased blood pressure, etc.
- **India's Reaction:**
 - **Indian doctors have welcomed** the research as good news for Covid-19 patients on ventilators.
The drug is **affordable and easily available in India**.
 - Earlier, the **Indian Council for Medical Research (ICMR)** revised the protocol for clinical management of Covid-19 and **allowed the use of remdesivir, tocilizumab and Convalescent Plasma Therapy (CPT)** on certain groups of patients.
Remdesivir reduced hospital stays for very sick Covid-19 patients but **has not been shown to improve recovery** itself.
- **Other Findings from the Research:**
 - Earlier, the same study showed that the **malaria drug hydroxychloroquine** was **not working against the coronavirus**.
 - The study enrolled more than 11,000 patients in England, Scotland, Wales and Northern Ireland who were given either standard of care or that plus one of the treatments mentioned below:
 - Dexamethasone.
 - HIV combo drug lopinavir-ritonavir.
 - Antibiotic azithromycin.
 - Anti-inflammatory drug tocilizumab.
 - Plasma from people who have recovered from Covid-19 that contains antibodies to fight the virus.

Source: IE