Molnupiravir: A Drug for Covid-19

Why in News

Recently, it is claimed that Molnupiravir, an oral drug, can cut the risk of hospitalisation in **Covid-19** patients by half, in phase 3 trials.

- In India, the Optimus Group recently announced the results of phase 3 clinical trials, which found 91.5% of patients given the drug tested **RT-PCR** (**Reverse Transcription Polymerase Chain Reaction**) negative.

Key Points

- **Molnupiravir:**
  - It belongs to a class of **broad spectrum antiviral drugs called nucleoside analogues**.
    - They act by interfering with the function of **viral** RNA (Ribonucleic Acids) **polymerases** – which are enzymes that make new viral RNA in infected cells.
    - RNA is a polymer of ribonucleotides and an important biological macromolecule that is present in all biological cells.
      - It is principally involved in the synthesis of proteins, carrying the messenger instructions from **Deoxyribonucleic acid (DNA),** which itself contains the genetic instructions required for the development and maintenance of life.
  - It works by **causing viruses to make errors when copying** their own RNA, introducing **mutations that inhibit replication**.
    - It was initially invented as **a drug for the** influenza virus**.**
- **Mechanism:**
  - These drugs work **by preventing the process of replication of the virus inside human cells.**
    - A **virus** is a biological agent that can self-replicate inside a host cell. The infected cells by viruses may produce thousands of new copies of the original virus at an extraordinary rate.
  - It **alters critical enzymes** that were necessary to the virus for replicating in the human body cells.
    - As of now, the **Emergency Use Authorization is awaited** for the drug but currently, it can be administered as a pill in a **5-day regimen.**

Source: IE