Supernova Stent Retriever

Prelims: *Current events of national and international events | Science & Technology*

Why in News?

India approves indigenous stroke device based on local trial data; launch scheduled for February 2026.

- It is a new***, indigenously developed*** medical device from India, used to ***treat severe strokes*** by removing clots and restoring blood flow to the brain within 24 hours.
- **Purpose –** It is used in ***mechanical thrombectomy***, a minimally invasive procedure to remove clots and restore blood flow in acute ischemic stroke patients.

> *An **acute ischemic stroke** is a medical emergency where blood flow to part of the brain is suddenly blocked, usually by a clot, depriving brain tissue of oxygen and nutrients, causing cells to die within minutes.*

- **Developed by –** Gravity Medical Technology, a private biomedical firm.
- **Clinical trial led by** – All-India Institute of Medical Sciences (AIIMS), Delhi, serving as the national coordinating centre and the lead enrolling site of the Supernova Stent Retriever system (GRASSROOT) study.
- **Approved by –** The ***Central Drugs Standard Control Organisation (CDSCO)*** has approved the device's manufacturing & marketing in India.
- **Trail Outcomes –** It has achieved high successful restoration of blood flow with brain bleed (3.1%), mortality (9.4%), and 50 % functional independence at 90 days.
- **Global Context –** The device has already been used to treat more than 300 patients in Southeast Asia, reinforcing safety and versatility.
- **Affordability –** It will now be made in India at affordable prices, bringing new hope to the 1.7 million Indians who suffer strokes each year.
- **Significance –** It is the ***1st time*** a stroke device in India has been approved entirely on local trial data, designed to meet India's unique stroke profile, where patients are often younger than in Western countries.

Quick Fact

India's Stroke Prevalence

• **Annual new cases** – As of 2025, India faces a **high & rising** stroke prevalence, with an estimated 1.7–1.8 million new stroke cases annually.
• **Incidence rate** – Around 145 per 100,000 population.
• **Age profile** – Nearly 15–20% of stroke patients are below 45 years, showing a sharp rise among young adults.
• **Global share** – India accounts for about **10% of global stroke cases**.
• **Mortality & disability** – Stroke remains the **2nd leading cause** of death and a major cause of long-term disability in India.

References

1. The Hindu | Indigenously built stroke device approved on domestic trial data
2. Business Standard | India sees a sharp rise in strokes among young adults

SHANKAR IAS PARLIAMENT
Information is Empowering