



drishti

Penicillin Revival to Fight Rheumatic Fever

 drishtiias.com/printpdf/penicillin-revival-to-fight-rheumatic-fever

In a bid to **fight drug resistance** and tackle the prevalence of **rheumatic heart disease**, the Government of India is planning a revival of the drug named **Penicillin**.

Background

- Penicillin was the **first antibiotic** that was discovered in **1928** by Alexander Fleming.
- It is still the **first-line antibiotic drug** in many western countries. This antibiotic was extensively used to treat American soldiers wounded in World War II.
- In India, it gradually went out of the markets because of **unrealistic price control** measures of the government.

The prices of the drug were kept so low that the manufacturers stopped making the drug and Penicillin went out of production. Although some of its more expensive derivatives continued to be prescribed.

Underlying Need

- India has a high burden of **rheumatic fever and rheumatic heart disease** (which generally goes **undiagnosed** and leads to **many maternal deaths at the time of childbirth**).

Rheumatic fever is **endemic** in India and remains one of the major causes of cardiovascular disease, accounting for nearly 25-45% of acquired heart disease.

- Population-based studies indicate the prevalence of rheumatic heart disease in India to be at a rate of about **2/1000 population**.

The surveys however conducted by **Indian Council of Medical Research (ICMR)** at the school-level indicate that the children in the age group of 5-16 years mark the overall prevalence at the rate of **6/1000**.

- According to the Health ministry, rheumatic fever and rheumatic heart disease can be treated by the intake of penicillin.

Penicillin is the **cheapest** option for rheumatic fever treatment.

Maternal death

According to the **World Health Organization**, maternal death is the death of a woman **while pregnant or within 42 days of termination of pregnancy**, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

Maternal Mortality Ratio

The maternal mortality ratio (MMR) is defined as the **number of maternal deaths** during a given time period per **100,000 live births** during the same time period. In India, the MMR was **130/100,000** in 2016.

Rheumatic Fever

- It is an **inflammatory** disease that can develop as a complication of inadequately treated strep throat or scarlet fever.
 - Rheumatic fever can cause permanent damage to the heart, including damaged heart valves and heart failure.
 - Not all sore throats go on to become rheumatic fever with severe joint pain or affect the heart in a disease that eventually leaves no option but to replace the heart valves- a condition known as **rheumatic heart disease**.
- **Prevalence:** Rheumatic fever is **most common in 5-15 years old children**, though it can also develop in younger children and adults.
- **Cause:** Rheumatic fever can occur **after an infection of the throat** with a bacterium called **Group A streptococcus**.
 - Group A streptococcus infections of the throat cause strep throat or, less commonly, scarlet fever. Group A streptococcus infections of the skin or other parts of the body rarely trigger rheumatic fever.

Hence, the government is planning to **procure** penicillin centrally for **three years** and administer it to all children between 5-15 years who have a sore throat, at least once.

- The drug will be dispensed through primary health centres or administered by Accredited Social Health Activists (ASHA) workers.
- The government is also in consultation with the **National Pharmaceutical Pricing Authority (NPPA)** to take it off from the price control list.
- To kickstart the production again, the government will procure the medicine centrally for three years so that manufacturers get encouraged to restart the production process.

Source: IE