Lymphatic Filariasis

Source: PIB

Why in News?

Recently, the Union Minister of State for Health and Family Welfare launched the first phase of the **Bi-annual Nationwide** Mass Drug Administration (MDA) campaign **for** Lymphatic filariasis (LF) **elimination.**

Note:

- The campaign aims to check disease transmission by **providing free preventive medications** to the residents in areas affected by the disease. The campaign will cover 92 districts across 11 states.

What is Lymphatic Filariasis?

- **About:**
  - Lymphatic filariasis, commonly known as **elephantiasis**, is a **neglected tropical disease(NTD)** caused by infection with **filarial parasites** transmitted through mosquitoes.
- **Prevalence:**
  - In 2021, approximately 882.5 million people in 44 countries lived in areas requiring preventive chemotherapy to halt the spread of infection.
  - LF is a serious public health problem in India. Currently, there are **345 lymphatic filariasis endemic districts in 20 states** and union territories of the country.
    - 75% of MDA districts are from 5 states Bihar, Jharkhand, UP, Odisha and Telangana.
  - Lymphatic filariasis is more prevalent among the **urban poor and affects all segments of the rural population.**
- **Impact:**
  - The infection **starts in childhood and accumulates through adulthood**, resulting in irreversible chronic disease conditions.
    - The disease inflicts stigma, mental suffering, social deprivation and economic loss and is a major cause of poverty in the affected communities.
- **Cause and Transmission:**
  - **Parasitic Infection:**
    - Lymphatic filariasis is caused by infection with parasites classified as nematodes (roundworms) of the family Filariodidea. There are 3 types of these thread-like filarial worms:
      - ***Wuchereria bancrofti*** (responsible for 90% of the cases)
      - ***Brugia malayi*** (causes most of the remainder of the cases)
      - ***Brugia timori*** (which also causes the disease)
  - **Transmission Cycle:**
    - Adult worms reside in the **lymphatic vessels,** producing microfilariae that

circulate in the blood.
        - Mosquitoes become infected by biting an infected host and transmit the larvae to humans, perpetuating the transmission cycle.
- **Symptoms and Complications:**
    - **Asymptomatic and Chronic Conditions:**
        - The majority of infections are asymptomatic, but chronic conditions can lead to **lymphoedema** (swelling of the limbs), **elephantiasis** (thickening of the skin and tissues), and hydrocele (swelling of the scrotum), causing **physical disfigurement and psychological distress.**
    - **Acute Episodes:**
        - Acute **inflammatory episodes** often accompany chronic conditions, leading to debilitating symptoms and loss of productivity among affected individuals.
- **Treatment and Prevention:**
    - **Preventive Chemotherapy:**
        - MDA with annual doses of medicines to the at-risk population is the **World Health Organization (WHO)** recommended strategy for eliminating lymphatic filariasis.
    - **MDA Regimens**:
        - Different drug regimens are recommended based on co-endemicity with other filarial diseases, aiming to **reduce microfilariae density and interrupt transmission.**
    - **Morbidity Management:**
        - **Surgery, hygiene measures, and clinical** care are essential for managing chronic manifestations and preventing disease progression.
    - **Vector Control:**
        - Supplemental strategies such as **mosquito control help reduce transmission** and complement preventive chemotherapy efforts.
- **WHO Response and Goals:**
    - **Global Programme to Eliminate Lymphatic Filariasis (GPELF):**
        - Launched in 2000, GPELF aims to **eliminate lymphatic filariasis as a public health problem** through preventive chemotherapy and morbidity management.
        - In 2020, GPELF set the following goals for the new NTD Road Map (2021–2030):
            - **Validation:** 80% of endemic countries (58) to validate elimination, maintaining low infection rates post-MDA.
            - **Surveillance:** All endemic countries (72) to implement surveillance to prevent disease resurgence.
            - **MDA Reduction:** Targeting zero population needing mass drug administration.
- **India's Initiatives:**
    - **Mission Mode India Multi-drug administration (MDA) Campaign** twice a year synchronized with **National Deworming Day (10th Feb and 10th August)**
    - **India is committed to eliminating Lymphatic Filariasis by 2027,** three years before the global target.