How PEP with single dose of Rifampicin can help prevent Leprosy in India?

Across districts and states, there is variation in LPEP implementation in terms of coverage of index cases, tracing of their contacts, screening of contacts, followed by administration of SDR.

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India has the highest burden of leprosy contributing nearly 57% of global leprosy cases. (Image Credit: Pixabay)

By Dr. Suchitra Lisam

Post exposure Prophylaxis (PEP) is effective in preventing disease after potential or documented exposure to certain pathogens causing the disease and in reducing the risk of secondary spread of infection. Depending on the type of exposure, different forms of PEP are available including vaccines, immune globulins, antibiotics and antiviral medications.

The main risk factor for leprosy is prolonged close contact with infectious, untreated cases. For control of leprosy, early case detection and prompt treatment with Multi-Drug Therapy (MDT) has been the cornerstone. The chance of finding a previously undiagnosed leprosy patient is ten times higher in household contacts of leprosy patients than the in general population and the chance of finding leprosy among leprosy contacts among different categories of neighbour and social contacts is between three and five-fold. Therefore, contacts are the main focus of leprosy control strategy.

In early 2000, large scale clinical trials with Single Dose Rifampicin (SDR) given as post-exposure prophylaxis (PEP) to contacts of newly diagnosed patients with leprosy have shown a 50-60% reduction of the risk of development leprosy over the following 2 years. With such hard evidence,

there was a need to study the effectiveness, and feasibility of contact tracing and SDR administration in routine leprosy programs.

Hence, to accelerate the uptake of this evidence and introduction of PEP into routine national leprosy programmes, the Global leprosy post-exposure programme (LPEP) was designed and piloted by the International Federation of Anti-Leprosy Association (ILEP) in collaboration with academic institutes and Ministry of Health across eight countries including India, Indonesia, Myanmar, Nepal, Sri Lanka, Tanzania, Brazil and Cambodia from 2015-2018, with funding support from Novartis Foundation. The Global LPEP feasibility study proved that PEP with SDR is safe, and can be integrated into different leprosy control programmes, and is well accepted by index patients, their contacts and health care workers.

It recommended rolling out SDR in all settings where contact tracing and screening have been established. In the year 2018, WHO published technical guidelines that recommend use of SDR as PEP for adults and child (aged 2 years and older) contacts of patients with leprosy, after excluding leprosy and tuberculosis disease, and in the absence of other contraindications, to prevent the development of leprosy and reduce the risk of secondary transmission to susceptible persons. It is predicted that through preventive treatment of 40 million people in 22 years, a 90% leprosy reduction can be achieved as per a recent paper dated 2nd March 2021 of NLR International.

India has the highest burden of leprosy contributing nearly 57% of global leprosy cases. In 2020-2021, there are 0.80 lakh leprosy cases on record as on 1st April 2020, with PR (Prevalence Rate) 0.57/10,000 population. In 2016, the Central Leprosy Division (CLD) under Ministry of Health & Family Welfare (MoHFW), Govt. of India introduced PEP treatment using SDR across high priority districts where Leprosy Case Detection Campaign (LCDC) was carried out, by following the operational guidelines on LPEP.

It involves visiting the houses of newly diagnosed leprosy (index) case for taking informed consent regarding their disclosure and PEP administration to contacts of case, tracing their contacts, screening of contacts for signs & symptoms of leprosy and tuberculosis, exclusion and other eligibility criteria, referral of contacts suspected of having leprosy or tuberculosis and administering SDR (a supervised dose depending on age/weight) to eligible contacts after taking informed consent. The LPEP program using SDR was launched in October 2018 as one of the key program components of NLEP by the CLD, Govt. of India.

The NLEP revised operational guidelines on post exposure Prophylaxis was issued to all states in 2019 for uniform implementation and reporting on key data and information as per the formats.

In 2020-2021, a total of 5,26375 contacts were screened/examined of 87,394 leprosy index cases, of which 3,52657 (67%) contacts were found

to be eligible, and of which total 2,25996 (64%) eligible contacts were administered SDR across 32 states and Union Territories (Ref: NLEP Annual Report 2020-2021). Across districts and states, there is variation in LPEP implementation in terms of coverage of index cases, tracing of their contacts, screening of contacts, followed by administration of SDR. Some of the key challenges in implementation of LPEP are the availability of rifampicin drug (particularly procurement) and the understanding of the LPEP guidelines by the general health care (GHC) providers and frontline workers.

The need of the hour for stopping the transmission of leprosy in the country is to generate public awareness about leprosy including prevention therapy (which is provided free of cost by the government health facilities or can be bought that costs around Rs.6/- per capsule for adult dose), training of medical officers and GHC providers including frontline workers on leprosy, their expected roles on LPEP, ensuring regular and adequate supply of SDR, expanding coverage of contacts for screening and SDR administration along with regular monitoring, quality control, documentation of best practices and lessons learnt. The doctors and health care providers working in the private sector are often consulted by patients for confirmation and treatment of leprosy. They can play a crucial role in educating the leprosy patients about preventive therapy (i.e. SDR) for

administration to contacts of leprosy patients and are provided free of cost under NLEP.

(The author is MBBS (LHMC/Delhi), MPH (Chula/BKK), PDCE (UCLA/USA), Country Coordinator of PEP++ – Enhanced Post Exposure Prophylaxis (PEP), a Multi country research program of NLR International NLR India. The article is for informational purposes only. Please consult medical experts and health professionals before starting any therapy, medication and/or remedy. Views expressed are personal and do not reflect the official position or policy of FinancialExpress.com.)