Leprosy - the current target in national programmes

Sir,

We read with great interest a review on “Spectrum of leprosy among suspected cases attending a teaching hospital in Western Rajasthan, India” by Kalita J et al.[1] The authors have described the spectrum of leprosy in their region and rightly stressed the importance of accommodating newer strategies like effective vaccine development and drug resistance testing in the fight against this disease. Since the study was retrospective in nature, we have attempted to add additional information for the benefit of the readers on other strategies that could be employed effectively. In an effort to identify and trace hidden leprosy cases, the Indian government had launched the Leprosy Case Detection Campaign (LCDC) nationwide in the year 2016. This campaign was implemented and came to fruition in multiple states, including Rajasthan. It consisted of a 14-day campaign launched in March/April 2016 in conjunction with the Pulse Polio Campaign. At a household level, every individual of the targeted population was thoroughly examined by one male and one female volunteer. A total of 34,000 new cases were identified, hence proving the campaign to be successful in terms of intensive case-finding.

Sparsh Leprosy Awareness Campaign (SLAC), launched on 30th January 2017 and Sapna were other such campaigns launched by the government which was primarily invested in organising Gram Sabhas alongside various other allied health sectors, addressing issues of stigma and discrimination and promoting awareness regarding the disease. This was done in an effort to increase self-reporting among the general public and to decrease the burden of disease among vulnerable household contacts by implementing measures such as contact tracing, thorough examination, effective and appropriate treatment and chemoprophylaxis. The special emphasis on women, children and those with disabilities is expected to flush out more hidden cases.

A new mascot for SLAC 2018 was Sapna which stemmed from the vision of “Kyunki Sapna hai kusht mukt Bharat ka”. This was the brain-child of Central Leprosy Division and The Leprosy Mission Trust of India. Sapna aimed to reach the doorstep of the community through the various awareness campaigns.[2]

WHO Antimicrobial resistance Monitoring (AMR) in Leprosy is one of the core areas in the Global Leprosy Strategy for 2016–2020. Mycobacterium indicus pranii (MIP) vaccine has been shown to have both immunotherapeutic and immunoprophylactic effects in multibacillary leprosy patients and their contacts respectively, in both hospital and population-based trials. Results have shown that there is an induction of conversion from lepromin negativity to positivity in multibacillary leprosy (MBL) patients that strongly suggest the improved immune response to the antigens of M. leprae. It has also shown potential in reducing bacillary load, upgrading the lesions histopathologically, complete clearance of granuloma and reduction in the duration of multidrug therapy.[3-5] On addition of immunotherapy, increased rate in granuloma clearance, faster reduction in infiltration fraction, faster bacillary clearance and increase in the epithelioid cells population was noted.[6]

Inclusion of PCR for Early Diagnosis

Field studies have shown that polymerase chain reaction (PCR)-based and reverse transcription-PCR-based techniques have shown a specificity of 100% and a sensitivity wide ranging from “34 to 80%” in patients with paucibacillary to >90% in multibacillary forms of the disease. Automation of PCR-based assays, which are based primarily on the amplification of the M. leprae-specific sequences and DNA fragments, have allowed their implementation in many reference laboratories, particularly in countries endemic with leprosy. This technique has been applied to samples of multiple types, including skin biopsy specimens.[7] The additional advantage is the identification of drug-resistant strains through this diagnostic modality. In the long run, the use of PCR at the grass-root level should be encouraged.

NIKUSHTH is a web-based reporting system for leprosy, which was launched by the National Leprosy Eradication Programme (NLEP) for the proper purpose of reporting and data management and uniformity in the information of the registered leprosy cases. It will help track all the activities being implemented in the programme. NLEP is also implemented online training software for leprosy workers in a few areas.[8] This real-time software will help us prevent reporting of previously diagnosed cases and also assist us in tracking migrant cases. This will provide a more accurate estimation of the incidence and prevalence of the disease.

Bacteriological and Morphological Index

Even though the authors have stressed on the bacteriological index, assessing morphological index during and after therapy would aid in assessing levels of viable bacilli. This would be relevant in detecting the risk of relapse in the patient and also determine the probability of contacts being infected.

SINGLE DOSE RIFAMPICIN (SDR) treatment has been offered to household contacts of new leprosy patients since November 2017. Several epidemiological studies have shown that the risk of finding a previously undiagnosed patient is...
Epidemiology and Strain Identification

Understanding the epidemiology of leprosy is crucial in the effective control of the disease. Since it is known that *M. leprae* cannot be cultured (in vitro) it has been difficult to assess exposure, the onset of infection, and various stages of disease progression. Lots of genetic studies have been underway to find particular markers that will definitely be helpful to know our understanding of the various aspects of the epidemiology of leprosy. With this leprosy treatment, complications such as lepra reactions also need to be managed cautiously and effectively.

At this juncture, we would like to emphasise that in the background of the COVID-19 pandemic, specialty care is deficient and this stresses the need for holistic management by the family medicine specialists, for appropriate initial treatment and referral for essential management.

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Conflicts of interest

There is no conflict of interest.

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