Single-Dose Rifampicin: What Current World Health Organization Guidelines Emphasis and Practical Special Attention?

Dear Editor,

In a strategy to reduce the transmission of leprosy bacilli infection, it is decided by the World Health Organization (WHO) in the current guideline to implement chemoprophylaxis by one of the bactericidal drugs targeted the contacts of patients who were diagnosed as a confirmed case of leprosy. The aim of this letter is to brief out the practical cautions to be undertaken by the health staff in the field when single-dose rifampicin (SDR) is implemented in the endemic areas.

It was based upon the randomised controlled trial, namely the COLEP which was a prospective serology and epidemiological study on contact transmission and chemoprophylaxis in leprosy (COLEP), and the trial summary is given for reference. The trial showed about 18,869 (86.9%) of the 21,711 contacts were followed up including placebo and the drug group for a period of 4 years. In the placebo group, 91 out of 9452 contacts, and in rifampicin drug group, 59 out of 9417 contacts had developed clinical leprosy. Hence, it was also found that in the trial that in the first 2 years of exposure to drug to contacts, there was a 57% risk of reduction of developing clinical leprosy. However, after 2 years, it did not show any major difference in efficacy between two groups. Hence, taking into account of reduction, it was concluded that SDR in leprosy contacts is associated with >50% (exactly 57%) reduction in the risk of developing leprosy over 2 years and around 30% after a theoretical incubation period of around 6 years in the cohort followed in Bangladesh COLEP. The findings of the above study provide evidence to use SDR as a cheaper and more practical secondary preventive intervention for the close contacts of leprosy patients being integrated with leprosy control national programmes. The implementation in the field will be a promising act and responsibilities. The beneficiary will be the adult contacts of leprosy patients and in children of 2 years of age and above. The important cautions to be considered are coexistence of leprosy with highly threatening tuberculosis disease. It was also clarified that the intervention should be implemented only by national programmes of respective countries with high endemicity. This strategy of implementation in national programmes will help in adequate management of contacts. The beneficiary of the strategy, namely contacts, will purely depend upon the consent of the index case who will be ready to disclose their disease status.

A practical orientation to the above implementation is outlined in the protocol of leprosy post-exposure prophylaxis. It is designed nicely for the evaluation of the feasibility and its impact on case detection rates by proper contact tracing and possible administration of SDR for the consented contacts. Hence, there are few more points to be considered cautiously when it is going to be implemented in the practical set up or in the field area of planned countries. A note on drug-related information regarding the adverse effects or flu-like syndrome regarding rifampicin should be important in the protocol or administration register. Even though the adverse events are rarely seen by a single dose of rifampicin, it should be cautiously seen. It was found in the study by Moet et al. that approximately 5063 were females in SDR received group.

As it is mentioned regarding other contraindications such as age restrictions in paediatrics and pregnancy status as exclusion criteria, the reproductive age group, especially women, should be interviewed properly before administering any drugs. Their marital status and the information on their plan for pregnancy or plan for any postponement of pregnancy should be noted. The contraception-related information should also be noted. The method of contraception should also be noted as whether contraceptive pills or barrier methods. Although this looks as simple or sometimes unwanted unwarranted, we should always think of drug interactions. The drug rifampicin is a potent enzyme inducer that may cause the failure of the oral contraceptive pills by induction of microsomal enzyme causing rapid metabolism of oral contraceptive pills. This may result in unplanned pregnancy if any of the contacts consumes it. Hence, a note is always mandated in these subgroups.

Hence, from the above-said information, more drug-related side effects have to be considered when SDR will be implemented in the nationwide globally. In India, it is already planned to be implemented from effect from 2nd October 2018.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

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