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Editorial
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Short Combination Treatment for Latent Tuberculosis in Children

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▸ See the article "Current Status of Latent Tuberculosis Infection Treatment Among Pediatric Patients in Korea: Prescription and Treatment Completion" in volume 39, number 7, e64.

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The treatment of latent tuberculosis infection (LTBI) is one of essential components for tuberculosis (TB) control, and especially important in young children. This is because when young children are infected with TB, they are at a high risk of developing the disease within a shorter period of time after exposure, and of developing more serious diseases such as disseminated TB or TB meningitis. They are also vulnerable because they are at potential risk of becoming TB patients in the future for longer periods of time throughout the rest of their lives.[1]

Among challenges in treating LTBI, the most significant issue is poor adherence to taking medication.[2] Because LTBI is a condition without symptoms or signs, patients often have low motivation due a lack of perceived efficacy and experience anxiety about treatment-associated adverse effects and stigmatization from taking medication, resulting in poor adherence.[3] In the current issue of *Journal of Korean Medical Science*, Kim et al.[4] compared the treatment incompletion rates between 9 months of isoniazid treatment (9H) and 3 months of isoniazid plus rifampicin (3HR) for latent tuberculosis infection in Korean children aged 11-18 years. They reported better compliance in 3HR group than in 9H group, with the 9H regimen being the strongest factor associated with treatment incompletion.[4] A multinational randomized open-label clinical trial reported that the 3-month rifamycin-based combination regimen was more compliant than the 9H regimen and was as effective and safe as the 9H regimen.[1] US Centers for Disease Control and Prevention recommends preferentially a combination of weekly rifapentine and daily isoniazid for 3 months for children aged 2 years and older.[5]

There are several hurdles to recommending 3HR as the preferred treatment in Korea. Firstly, since pediatric syrup of rifampicin is not available in Korea, capsules or tablets must be split or crushed for preparation. However, pharmacists are reluctant to dispense it due to concerns about discoloration of the dispensing tools. The introduction of pediatric syrups may help overcome these obstacles. Additionally, one alternative could be reconsidering the introduction of rifapentine for use in children, which was attempted and then aborted a few years ago in Korea. Second, inducing resistance to rifampicin is another concern regarding rifampicin-containing treatment for LTBI, as it is a crucial component of the TB treatment regimen.[6] However, it is noteworthy that the development of rifampicin resistance has not been frequently observed in other clinical trials of therapy for LTBI, although studies involving children have been very limited.[6]

Additionally, Kim et al.[4] reported that physicians in primary hospitals, hospitals located in non-metropolitan regions, and non-pediatric physicians require increased attention when administering LTBI treatment to pediatric patients to ensure treatment completion, suggesting that preferential use of 3HR could be an effective strategy to enhance treatment completion.

Sufficient patient (or caregiver)-medical provider communication is crucial to enhancing adherence.[3] A well-trained pediatrician with experience in communicating with pediatric patients is ideal in LTBI management in children, but this may not always be available. Therefore, it is essential for all doctors treating pediatric LTBI patients to clearly aware the effectiveness and necessity of pediatric LTBI treatment and provide accurate information about safety to reduce the anxiety of patients and their caregivers. In addition, it is suggested for dedicated nurses, one of major elements of public–private mix (PPM) program for tuberculosis in Korea,[7] to provide more active support for the treatment of LTBI in children.

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