

TREATMENT OF TUBERCULOSIS IN SPECIAL SITUATIONS

MOHAMMAD DELWAR HOSSAIN¹, ASIF MUJTABA MAHMUD², MD. ALI HOSSAIN³, MOHAMMAD ABDUS SHAKUR KHAN⁴, KAZI SAIFUDDIN BENNOOR⁵, MD. FERDOUS WAHID⁶

¹Professor, Respiratory Medicine and Clinical Director, BIRDEM General Hospital, Dhaka, Bangladesh. ²Senior consultant, Asgar Ali Hospital, Dhaka, Bangladesh. ³Senior consultant, Bangladesh specialized Hospital, Dhaka, Bangladesh. ⁴Assistant Professor, Department of Respiratory Medicine, National Institute of Diseases of the Chest and Hospital (NIDCH), Mohakhali, Dhaka, Bangladesh. ⁵Associate Professor, Department of Respiratory Medicine, National Institute of Diseases of the Chest and Hospital, Mohakhali, Dhaka, Bangladesh.

Treatment of Tuberculosis in special situations implies overcoming special challenges in patients with diabetes, pregnant women, people aged over 65 years, and those with chronic kidney or liver disease. Rifampicin is a potent hepatic enzyme inducer, may lower plasma levels of sulphonyl urea and can increase the hypoglycemic effect of metformin. Since insulin is not metabolized, no pharmacokinetic interactions with anti-TB drugs occur. Gastrointestinal upset and hepatitis are reported as the most frequent adverse events in older people. In patients >80 years, pyrazinamide may be omitted. In TB patients with chronic kidney disease (CKD), an inappropriate dosage of anti-TB drugs can result in unsuccessful treatment or side effects. Current guidelines for first-line anti-TB drugs therefore recommend that dosages of ethambutol (EMB) and pyrazinamide (PZA) be adjusted according to patient renal function and body weight, although no change in dosage is necessary for patients with mild renal insufficiency. However, it remains unknown how the renal function-based dosage adjustments recommended by the guidelines affect efficacy outcomes for TB patients with CKD. In chronic liver disease (CLD) patients, The Child-Turcotte-Pugh (CTP) score can be used as a guide for designing appropriate regimens. In stable CLD (CTP d⁷), a treatment regimen including isoniazid, rifampicin, and ethambutol is recommended, a 2-month intensive phase with the three drugs, followed by isoniazid and rifampicin continuation phase for 7 months partially liver-sparing regimen consisting of Ethambutol, Rifampicin, and a quinolone for 9 months is advisable in case of more severe CLD (CTP 8–10). If CLD is very advanced (CTP £11), a total liver-sparing regimen consisting of Ethambutol and a quinolone (Levofloxacin or Moxifloxacin) for 12 months.

Keywords: Tuberculosis, special situations, chronic kidney disease, chronic liver disease

Date of received: 10.04.2023

Date of acceptance: 05.05.2023

DOI: <https://doi.org/10.3329/bjm.v34i20.66145>

Citation: Hossain MD, Mahmud AM, Hossain MA, Khan MAS, Bennoor KS, Wahid MF. Treatment of Tuberculosis in special situations. *Bangladesh J Medicine* 2023; Vol. 34, No. 2(1) Suppl. 196-197.