

## **Infection Diseases and Organ Transplantation**

### **Management of Mycobacterium Tuberculosis (MTB) in organ transplant patients**

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Approximately 25% of the world's population is infected with MTB.

MTB in transplant recipients is 20-70 times higher than that in the general population . Therefore, it is common for solid organ transplant (SOT) recipients to have MTB infection.

Classic symptoms of MTB, may not always be present in transplant recipients.

Extrapulmonary TB such as meningitis, genitourinary TB, intestinal TB, and tubercular lymphadenitis have been reported in SOT patients.

Latent tubercular infection(LTBI )cases do not show any symptoms or signs.

TST and IGRAs are two very important test that can diagnose LTBI.

The diagnosis of active TB in SOT recipient is challenging:

Radiological findings of pulmonary TB in SOT patients may demonstrate focal or diffuse interstitial infiltrates, nodules, pleural effusion, cavity lesions, or a miliary pattern.

Rapid nucleic acid amplification techniques such as X-part MTB/resistance to rifampicin (RIF), which is a rapid and sensitive molecular test for MTB and RIF.

In living organ donation, donors should undergo all the evaluation process in SOT candidates.

Isoniazid is the most studied drug for LTBI treatment All transplant candidates and recipients with a positive TST or IGRA should be advised to undergo prophylactic isoniazid treatment.

Guidelines recommended a 6-month course of treatment for active TB infection. The first 2 months, also called the intensive phase, includes four drugs: isoniazid, rifampicin, pyrazinamide, and ethambutol.

The next 4 months, also called the continuation phase, includes two drugs: Isoniazid and Rifampicin.

In the case of organ transplant recipients, the most appropriate type and length of therapy remains controversial decisions.

Rifampicin free regimen with -isoniazid, pyrazinamide, and Ethambutol for the first 2 months, and isoniazid and ethambutol for a total of 18 months.

New treatment regimens for MDR-TB need to be evaluated .