

Tuberculosis Drug Resistance, Risk Factors and Treatment

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DESCRIPTION

The infectious disease tuberculosis is brought on by the bacteria *Mycobacterium tuberculosis* (TB). Although it can affect other bodily regions, it typically affects the lungs. TB is a major global health problem, and drug resistance has become a serious concern. Drug-resistant TB is a condition where the bacteria that cause TB are no longer susceptible to the drugs that are commonly used to treat the disease. This can happen when patients do not complete their treatment, when they are not given the right drugs, or when the bacteria develop mutations that make them resistant to the drugs.

There are two main types of drug-resistant TB. Multidrug-resistant TB (MDR-TB) and Extensively Drug-Resistant TB (XDR-TB). MDR-TB is resistant to at least two of the most effective drugs used to treat TB, while XDR-TB is resistant to even more drugs, including the most powerful antibiotics.

The emergence of drug-resistant TB is a serious threat to global health, as it makes the disease much harder to treat and increases the risk of transmission. It also increases the cost of treatment and the risk of adverse effects, and can lead to higher rates of morbidity and mortality.

There are several factors that contribute to the development of drug-resistant TB. One of the main factors is poor treatment adherence, where patients do not take their medications as prescribed. This can lead to the development of drug-resistant bacteria and the spread of the disease. Another factor is the inappropriate use of antibiotics, where patients are given drugs that are not effective against the bacteria that cause TB. This can happen when doctors prescribe antibiotics without first testing for drug resistance, or when patients obtain antibiotics without a prescription.

To address the problem of drug-resistant TB, it is essential to improve the diagnosis and treatment of the disease. This includes better testing for drug resistance, more effective drugs, and improved treatment regimens that are easier for patients to adhere to. There is also a need for greater awareness and education about the importance of completing treatment, as well as the risks associated with inappropriate antibiotic use. This includes educating healthcare providers, patients, and the

general public about the importance of proper TB management and the consequences of drug resistance.

Factors that increase the risk of getting TB include

- Close interaction with a TB patient
- Living or working in an environment that is overcrowded or improperly ventilated
- Having a weakened immune system, such as from HIV infection, cancer, diabetes, or malnutrition
- Smoking and other substance abuse
- Age, as TB is more common in older adults

It's essential to keep in mind that TB is a disease which can be treated and cured. Prompt diagnosis and treatment with a combination of antibiotics are essential to prevent the spread of TB and prevent complications.

Treatment

The most commonly used medications for TB treatment are isoniazid, rifampin, ethambutol, and pyrazinamide. Treatment usually involves an initial phase of two months of daily medication followed by a continuation phase of four to seven months of medication.

It's important to take all of the medications as prescribed, even if you start to feel better before the treatment is complete. Failure to complete the full course of treatment can result in the development of drug-resistant TB, which can be more difficult to treat.

In addition to medication, TB patients should also take steps to prevent the spread of the infection to others. This includes covering their mouth when coughing or sneezing, staying home from work or school until they are no longer contagious, and avoiding close contact with others until the infection is no longer active.

CONCLUSION

In conclusion, drug-resistant TB is a major global health problem that requires urgent action. It is essential to improve the diagnosis and treatment of the disease, as well as to increase

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awareness and education about the risks associated with inappropriate antibiotic use. By working together, we can help

to prevent the spread of drug-resistant TB and ensure that patients receive the best possible care.