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The enigma of recurrence: post-tuberculosis treatment paradoxical reactions

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Background

In non-endemic settings, patients presenting with recurrent symptoms of TB disease after cure or completion of treatment often lead to dilemmas on differentiating recurrence from paradoxical reactions (PR). We reviewed the literature on the incidence of late onset PR, and best-practice diagnosis and management thereof.

Materials and Methods

We performed a literature review in PubMed using the search terms ‘tuberculosis’, ‘recurrence’ and ‘paradoxical reaction’ (PR).

Results

The majority of reports were on recurrent symptoms after lymph node TB and TB meningitis. The incidence of post-treatment PR ranged between 5-30%, and was more frequent than recurrence (3%). Risk factors identified among lymph node TB were younger age, male sex, local tenderness and larger lymph node size at initial presentation.

The diagnostic approach consists of the exclusion of recurrent TB disease, be it relapse or re-infection. In non-endemic settings the latter is less likely but not impossible due to TB transmission within high-risk groups such as migrants. The cornerstone of diagnosis is mycobacterial culture, PCR can be false-positive due to non-viable mycobacteria.

Treatment is preferably conservative; PR after TB meningitis requires more urgent intervention than after lymph node TB. The treatment of choice is prednisone; in case of failure, anti-inflammatory treatments such as infliximab have been tried successfully. Surgical removal of lymph nodes are not recommended due to risk of fistulas, whereas repeated aspiration can be successful.

Conclusion

Post-treatment PR are relatively common in certain types of TB. The mainstays of diagnosis and management are negative mycobacterial cultures and anti-inflammatory treatment.