Potential treatment for XDR-TB?

Extensively drug-resistant tuberculosis (XDR-TB) is associated with alarmingly high rates of mortality and is thought to account for an increasing proportion of cases of the infection worldwide. Multidrug-resistant tuberculosis (MDR-TB) describes strains of tuberculosis that are resistant to at least two main first-line drugs. XDR-TB is MDR-TB that is also resistant to three or more second-line drugs. Some experts have speculated that XDR-TB is effectively untreatable.

Traditionally, β-lactam antibiotics have never proved to be a useful treatment in tuberculosis as *Mycobacterium tuberculosis* produces a highly active β-lactamase. This laboratory-based study examined the effects of combining various β-lactams with clavulanate, a β-lactamase inhibitor found to be effective against the β-lactamase produced by *M tuberculosis*. The researchers found that the combination of meropenem and clavulanate had potent activity against drug-susceptible laboratory strains of *M tuberculosis*. Furthermore, they discovered that the meropenem-clavulanate combination inhibited the growth of 13 strains of XDR-TB. The combination was found to be equally effective against both susceptible and XDR strains.

The synergistic combination of these two commonly used drugs could be used as a potential treatment in XDR-TB, considered by many to be incurable. A clinical trial would seem to be appropriate.


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