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Rifapentine

A Viewpoint by Pierre Chaulet

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Since the 1970s, rifampicin combined with isoniazid has been crucial in short course (i.e. 6 or 8 months duration) chemotherapy for tuberculosis. Rifapentine offers a new opportunity to make 'directly observed treatment' easier for patients. A single 600mg dose of rifapentine produces a peak serum concentration of 22 mg/L, whereas the same dose of rifampicin produces a peak of 10 μg/ml. The elimination half-life of rifapentine is 16 to 20 hours versus 2 to 3 hours for rifampicin. These properties will give rifapentine a prominent role in the future treatment of drug-susceptible tuberculosis, but not multidrug-resistant tuberculosis, since rifampicin-resistant strains are cross-resistant to rifapentine.

Rifapentine will be especially important during the continuation phase of treatment. Several studies have shown that rifapentine, given once a week with an appropriate dose of isoniazid, during the continuation phase was almost as effective as daily rifampicin plus isoniazid. More studies are needed to assess different dosages of once-weekly rifapentine plus isoniazid and to determine the most effective combinations for 6-month regimens in national tuberculosis programmes.

The use of rifapentine during the intensive phase of treatment, in combination with other drugs, remains to be addressed.

Rifapentine is a new hope for improved management of tuberculosis. ▲