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Rifapentine vs. rifampicin for the treatment of pulmonary tuberculosis: a systematic review.

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OBJECTIVE: To evaluate the efficacy and safety of rifapentine (RPT) vs. rifampicin (RMP) for the treatment of pulmonary tuberculosis (PTB).
DESIGN: Systematic review of randomised controlled trials (RCTs) that compared combination drug regimens containing RPT with those containing RMP for the treatment of drug-susceptible or previously untreated PTB.
RESULTS: Nine RCTs were identified. Statistically significant differences were not found in the cure rates, severe adverse effects, severe hepatotoxicity or bacteriological relapse rates between the regimens containing once- or twice-weekly RPT and those containing daily RMP for human immunodeficiency virus (HIV) negative patients, but were found in the bacteriological relapse rates between regimens containing once-weekly or less frequent RPT and those containing twice- or thrice-weekly RMP: the pooled relative risks in the two subgroups were respectively 1.71 (95%CI 1.13-2.58, P = 0.01) and 2.44 (95%CI 1.15-5.18, P = 0.02). The trial for HIV-positive patients did not show significant differences in the sputum conversion rate, severe adverse effects or bacteriological relapse rate between the RPT- and RMP-containing regimens; four of the five relapses were associated with the RPT-containing regimen, but none of the three relapses with the RMP-containing regimen produced monoresistance to rifamycin (RIF).
CONCLUSION: Once- or twice-weekly RPT and daily RMP have similar efficacy and safety for the treatment of HIV-negative PTB, but once-weekly or less frequent use of RPT, in comparison with twice- or thrice-weekly RMP, increases the risk of bacteriological relapse. RPT might increase the risk of resistance to RIF in HIV-positive patients.

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