



# New treatments for rifampin resistant tuberculosis. Safe and effective?

## Nuevos tratamientos para la tuberculosis resistente a rifampicina. ¿Seguros y eficaces?

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Due to the impact of the COVID-19 pandemic, the World Health Organization (WHO) predicts a global increase, in 2022-2023, of half a million cases annually of rifampicin-resistant tuberculosis (RRTB/MDR).<sup>1</sup> Added to the above, even before the pandemic, only one in three patients has received treatment,<sup>2</sup> in addition, with a very low cure rate. The regimens used to treat RRTB/MDR, traditionally consisted of many oral drugs, expensive, toxic and of little activity, which motivated the implementation of a multi-drug regimen; to these was added an injectable agent, at least for six months, which produced very serious side effects, such as irreversible hearing loss or renal failure, causing many dropouts.

With the meta-analysis published by the MDR-TB analysis collaborative group, headed by Dr. Menzies, where they reported that the injectable agents proved not to have the efficacy that was believed. In contrast, in the study, both third-generation quinolones, linezolid, clofazimine and carbapenems were shown to have greater effectiveness in treatments;<sup>3</sup> this had already been reported also by Palomino and Martín.<sup>4</sup> There are three new oral drugs with high effectiveness for the treatment of RRTB/MDR: bedaquiline,<sup>5</sup> delamanid<sup>6</sup> and pretomanid.<sup>7</sup> With the advent of these new drugs, different trials of short, safe and effective treatments have been implemented. These regimens include a

new six-month treatment based on the combination of bedaquiline, pretomanid and linezolid, in combination with moxifloxacin (BPALM), or without the latter (BPAL), which were highly recommended by the WHO<sup>8</sup> and which appeared in important publications.<sup>9-11</sup>

Laniado-Laborín *et al.*<sup>12</sup> publish in this issue the results of the treatment for RRRT/MDR with a shortened schedule in 26 consecutive patients with drugs suggested by the WHO<sup>13</sup> of groups A and B to demonstrate their efficacy and safety; the conversion to culture was  $1.42 \pm 0.82$  months (six weeks) and the conversion time of bacilloscopy was  $1.75 \pm 0.95$  months (seven weeks), much higher than the previously used schemes where an injectable and drugs of poor activity were integrated, and which lasted up to more than 18 months. The activity of the new drugs, with significant bactericidal and sterilizing activity, has given hope of curing the greatest number of patients with RRTB/MDR. A major drawback is adverse reactions, but they can be managed without the scheme losing its effectiveness. However, the follow-up must be very punctual to be able to identify them; and the doctor must have experience to identify them. Unfortunately, there are not many specialists who are interested in treating this situation, so it will be very important to train first contact doctors so that these safe and effective schemes offer a cure for this disease and prevent cases from continuing to increase.

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