



IMAGES IN PAEDIATRICS

Adolescence, multidrug resistant tuberculosis, bedaquiline and videotapes

Adolescencia, tuberculosis multirresistente, bedaquilina y cintas de vídeo

Anna Gamell^{a,*}, Cristina Latre^b, Maria Goretti López-Ramos^b,
Antoni Noguera-Julian^{a,c,d,e}

^a Servicio de enfermedades infecciosas y patología importada, Hospital Sant Joan de Déu, Barcelona, Spain

^b Servicio de Farmacia, Hospital Sant Joan de Déu, Barcelona, Spain

^c Consorcio de Investigación Biomédica en Red de Epidemiología y Salud Pública (CIBERESP), Madrid, Spain

^d Departamento de Pediatría, Facultad de Medicina, Universitat de Barcelona, Barcelona, Spain

^e Red de Investigación Traslacional en Infectología Pediátrica (RITIP), Madrid, Spain

Available online 22 June 2023

Multidrug resistant tuberculosis (MDR-TB) is uncommon in Spain.¹ Compared to that of drug-susceptible TB, the treatment of MDR-TB is longer, more toxic and requires a higher pill burden. The World Health Organization (WHO) and different scientific societies favour oral treatment regimens with bedaquiline over second-line regimens containing injectable drugs, and recommend directly observed treatment (DOT).²

Although it has been considered the first-line drug for MDR-TB since 2019,² bedaquiline was not funded in the Spanish health system until October 20, 2022.³

We present the case of a female patient aged 15 years given a diagnosis of pulmonary MDR-TB in December 2020. We designed an all-oral treatment regimen with bedaquiline, levofloxacin, linezolid and clofazimine. We applied for funding for bedaquiline unsuccessfully, and our hospital eventually agreed to cover the drug costs (€23 213). The patient completed 52 weeks of treatment, which achieved clinical and radiological resolution.

The patient was offered DOT, but refused it because it was incompatible with school hours. We offered overseeing her treatment through video-DOT. Every day, she recorded herself taking the drugs and sent the video through an app to her physicians. The experience was good, and we consider video-DOT a good option for adolescent TB patients in our setting.

Finally, we celebrate that bedaquiline is now funded in the Spanish public health system, both for the optimal treatment of individual patients and for the prevention of transmission in the community.

Acknowledgements

We thank Dr Julià Gonzalez-Martin for his contribution through the performance of drug susceptibility testing and its interpretation and Dr José A Caminero and for his valuable recommendations for the optimal management of our patient.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.anpedi.2023.01.013>.

DOI of original article: <https://doi.org/10.1016/j.anpedi.2023.01.013>

* Corresponding author.

E-mail address: annamaria.gamell@sjd.es (A. Gamell).

References

1. Ministerio de Sanidad - Profesionales - Salud Pública - Prevención y Promoción - Plan Tuberculosis [Internet]. [cited 2022 April 12]. Available from: <https://www.sanidad.gob.es/profesionales/saludPublica/prevPromocion/PlanTuberculosis/planTuberculosis.htm>.
2. Caminero JA, García-García JM, Caylà JA, García-Pérez FJ, Palacios JJ, Ruiz-Manzano J. Update of SEPAR guideline «Diagnosis and Treatment of Drug-Resistant Tuberculosis». *Arch Bronconeumol.* 2020;56:514–21.
3. Agencia Española de Medicamentos y Productos Sanitarios. Informe de Posicionamiento Terapéutico de Bedaquilina (Sirturo®) [Internet]. 2022 [Accessed 14 February 2023]. Available from: <https://www.aemps.gob.es/medicamentosUsoHumano/informesPublicos/docs/IPT-bedaquilina-Sirturo-tuberculosis-pulmonar.pdf>.