

Author :Pankhaniya Ritik , Department of Pharmacology and Clinical Pharmacology, USMF “Nicolae Testemițanu”

Scientific coordinator: Dr. Ianoș Corețchi ,Department of Pharmacology and clinical pharmacology, USMF “Nicolae Testemițanu”

Introduction - The use of antibacterials has become increasingly strained due to increased rates of resistance & with less development of new agents. As a result, multi-, extensively-, and pan-drug resistant bacterial strains are now frequently encountered.

Keywords - New antimicrobials, multidrug resistance.

Purpose - To highlight recently developed antibacterial medicines and their role in clinical practice.

Results - II new antibiotics that have been approved since 2017, New drug Pretomanid is an antimycobacterial indicated, as part of a combination regimen(fig-I).

The NEW ENGLAND JOURNAL of MEDICINE

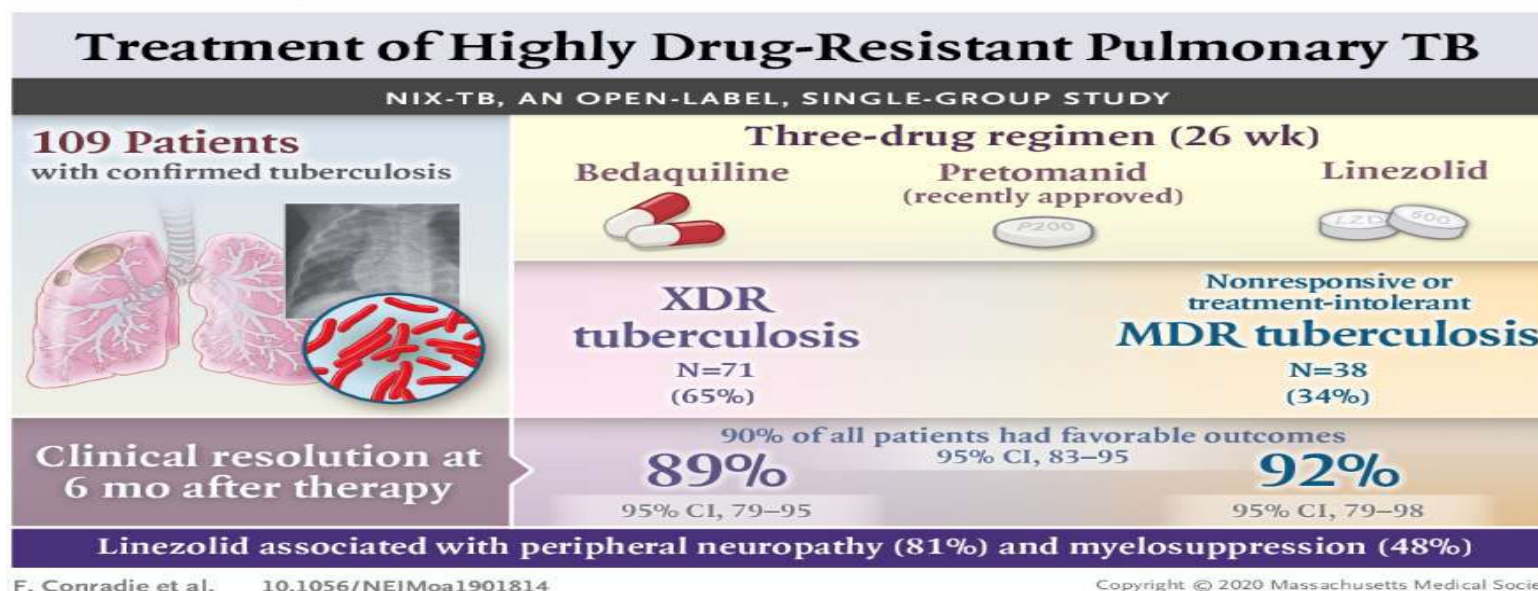


Figure 1. Treatment of Highly Drug-Resistant Pulmonary Tuberculosis (Francesca Conradie et al., 2020)

Cefiderocol for the treatment of urinary tract infections and acute pyelonephritis. Also as first-line therapy for Infection-related Ventilator-Associated Complications, Hospital-acquired pneumonia & Ventilator-associated pneumonia (fig 2). Ceftazidime-avibactam licensed for carbapenemase producers(fig 3). In adults specifically addressing the use of fidaxomicin and bezlotoxumab for the treatment of *C. difficile* infection (fig 4).

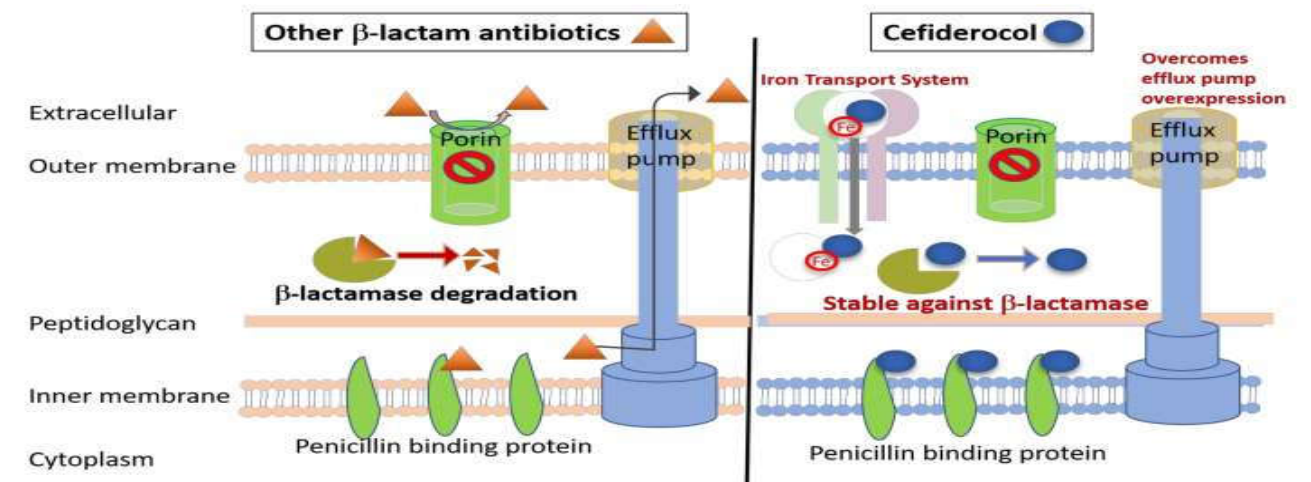


Figure 2. Cefiderocol mechanism of action (Hongmei Wang et al.,2022)

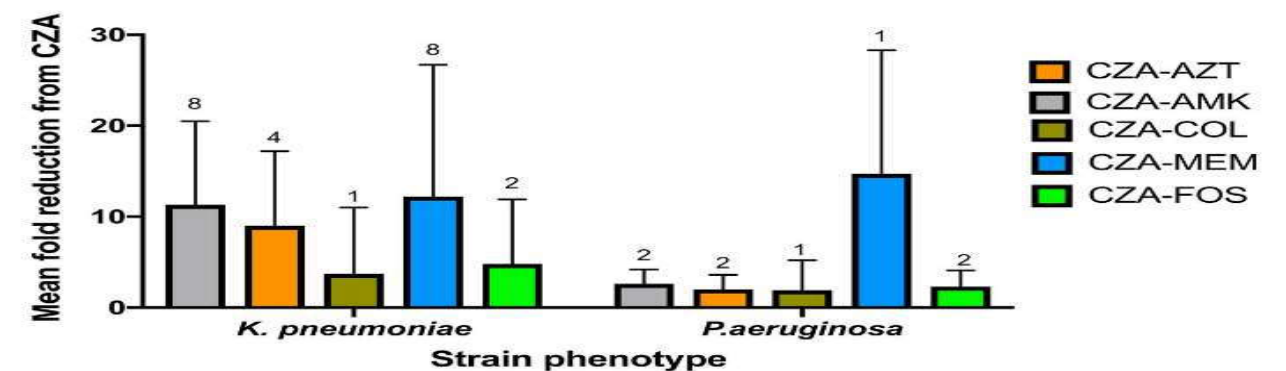


Figure 3. MIC reductions of CZA in combination with adjunctive against *K.pneumoniae* and *P.aeruginosa* (Sandra Mikhail et al.,2019)

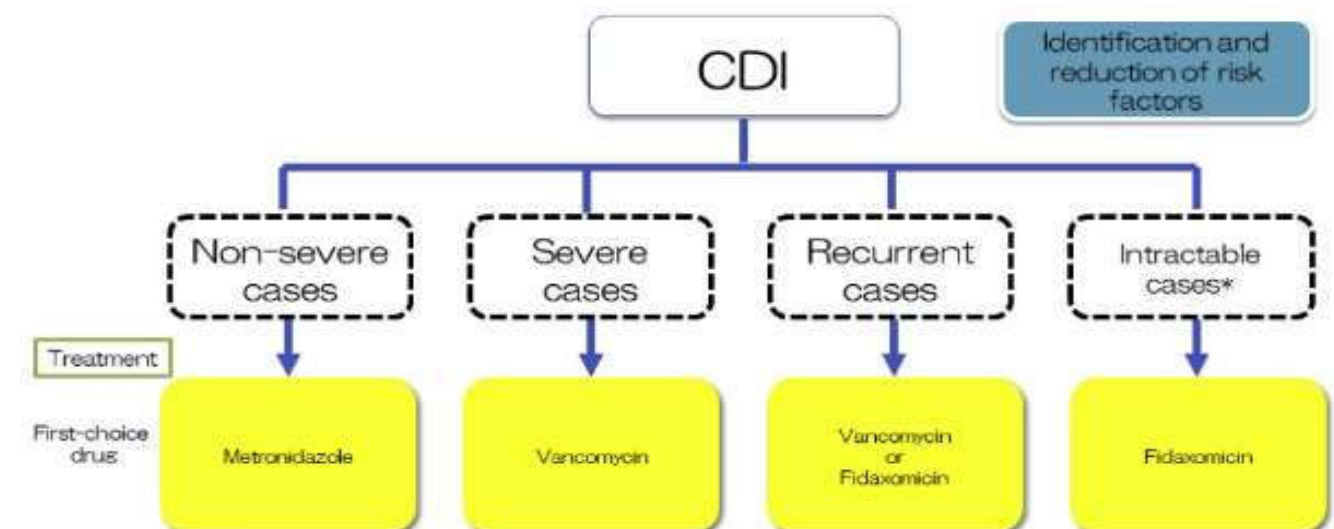


Figure 4. *C. difficile* treatment algorithm (Kunishima et al.,2022)

Conclusions - New antibacterial agents are mainly derivatives of existing classes. There is a significant need for novel antibacterial drugs and research.