Tedizolid: A Useful Weapon?

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Introduction:

Tedizolid is a relatively new oxazolidinone antibiotic, licensed in the UK for acute skin and associated structure infections. There may be scope for use for other indications, but there is a lack of evidence for both efficacy and tolerance in prolonged courses [1]. Our centre has been using Tedizolid to treat highly selected patients, predominantly as a switch agent from Linezolid within our complex oral and parenteral antibiotic therapy (COPAT) service when ongoing oxazolidinone therapy is felt necessary. This poster outlines our experience to date.

Methods:

We included all consecutive patients prescribed Tedizolid, July 2016 to May 2017. We extracted relevant demographic and clinical data by review of hard-copy and electronic case-notes and laboratory results systems, and then transcribed to an Excel spreadsheet.

Results:

17 patients were identified (mean age = 59). See Table 1 for demographic and clinical data. 14 patients received Linezolid for a mean of 24 days before switching to Tedizolid (1st-line use in 3 patients). 64% stopped Linezolid due to intractable symptoms and 21% due to deranged blood counts; 1 patient had both and another patient stopped due to a potential drug-drug interaction. Linezolid resulted in the following mean decreases in full blood count (FBC) parameters: haemoglobin (Hb) 6 g/L; white cell count (WCC) 1.9 x 10^9/L; and platelets 149 x 10^9/L with 4 patients having a Hb <90 g/L at end of therapy. By contrast, after a mean of 32 days of Tedizolid, changes in mean FBC parameters were: Hb and WCC increases of 4 g/L and 0.3 x 10^9/L, respectively, with a decrease in platelets of 15 x 10^9/L and no patients with a Hb <90 g/L. 14 (82%) patients completed their planned course of Tedizolid, whilst 3 stopped early; 1 stopped of their own choice, 1 due to fatigue and 1 due to hyponatraemia (Na = 119). 9 patients (53%) were also prescribed other antibiotics. Adverse effects are shown in Table 3. At the end of Tedizolid, 11 patients had clinically improved (64.5%), 4 (23.5%) showed no change and 2 (12%) patients had deteriorated; 1 patient died (see discussion).

Demographics / Diagnosis	Number of Patients	% of Patients
Male	9	53%
Female	8	47%
>1 Diagnosis	5	29%
Infected Metalwork/Prosthetic Joint	7	41%
Surgical Wound Infection	4	24%
Osteomyelitis	3	18%
Cellulitis/Soft Tissue Infection	2	12%
Foot Infection	2	12%
Bacteraemia	1	6%
Discitis	1	6%
Healthcare Associated Infection	1	6%
Septic Arthritis	1	6%

Table 1: Basic Demographics and Diagnoses

References

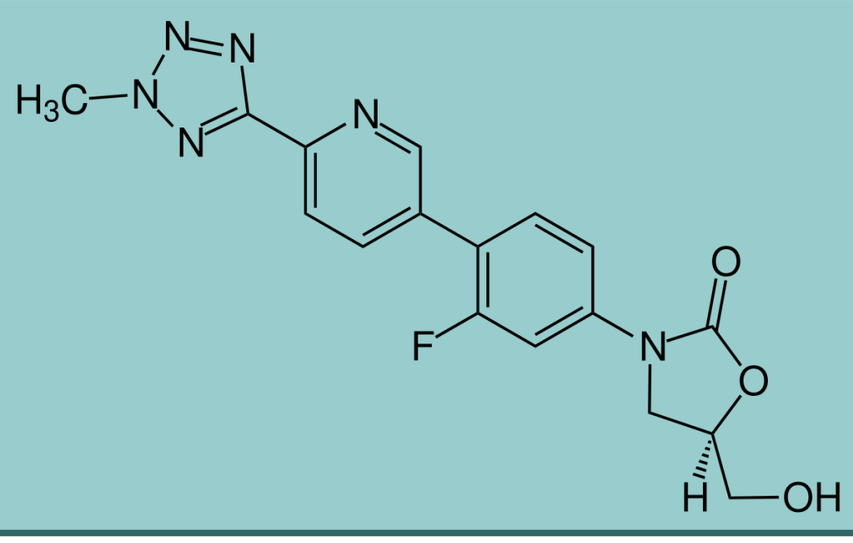
i Bouza, E, Munoz P, Burillo A. The role of tedizolid in skin and soft tissue infections. Current Opinion Infectious Disease. 2018 April;31(2):131-140
ii Khatchatourian L, Le Bourgeois A, Asseray C *et al.* Correction of myelotoxicity after switch of linezolid to tedizolid for prolonged treatments. Journal of Antimicrobial Chemotherapy. 2017 April; 72(7): 2135-2136
iii Image from: https://de.wikipedia.org/wiki/Tedizolid

Microbiology	Number of Patients	% of Patients
Coagulase negative staphylococci	9	53%
Staphylococcus aureus	5	29%
Group C/G haemolytic streptococci	3	18%
Enterococcus faecalis	3	18%
Streptococcus oralis	1	6%
Rothia mucilaginosa	1	6%
Pseudomonas spp.	5	29%
Proteus spp.	2	12%
Morganella spp.	1	6%
Stenotrophomas maltophilia	1	6%
No growth	4	24%
Polymicrobial	8	47%

Table 2: Microbiology

Adverse Events Reported		
None	13	76%
Anaemia (not thought to be Tedizolid)	1	6%
Loose Stools	1	6%
Hyponatraemia (not thought to be Tedizolid)	1	6%
Fatigue	1	6%

Table 3: Adverse events of therapy reported



Discussion

Tedizolid was well tolerated despite being used in a cohort of patients most of whom had switched from Linezolid due to adverse effects or intolerance. The patient with anaemia tolerated a prolonged course of Tedizolid once the Hb had recovered, with a final Hb of 107 g/L (initial anaemia not thought to be Tedizolid related). The patient who stopped Tedizolid due to fatigue had also recently stopped taking their analgesia. The patient with hyponatraemia subsequently tolerated a prolonged course of Tedizolid. The patient who chose to stop felt they had 'long enough' and reported some loose stools.

Patients were treated for highly complicated and sometimes polymicrobial infections, not all of whom were expected to be cured, and it is therefore unsurprising that one-third did not improve. The one patient who died did so of cerebral aspergillosis; Tedizolid was prescribed for a non-cerebral intercurrent bacterial infection.

Although highly provisional, our early data suggest Tedizolid is well tolerated and efficacious in patients who do not tolerate or suffer adverse effects whilst taking Linezolid, supporting a previous report [2].