Bone and joint infections (BJI) relapses have been described with the standard dose of ertapenem (1g/24h), a long acting carbapenem; in consequence, this drug is not recommended for BJI treatment. However, previous preliminary data suggest that 1g/12h administered intravenously (IV) or subcutaneously (SC) would be safe and efficient in patients with BJI.

36 patients were included (age 59±17 years; 21 males). Most of patients had chronic (35 [97%]) and/or implant-associated (15 [42%]) BJI.

Most isolated bacteria were Enterobacteriaceae (35 [97%]), including 9 MDR, anaerobes (10 [28%]), and/or meticillin-susceptible S. aureus (8 [22%]).

For the 31 patients (86%) receiving SC injections (totaling 3’923 injections, figure 1), no necrosis at the injection site was reported.

An adverse event resulting in ertapenem discontinuation occurred in 5 patients (14%), including 4 encephalopathies (day 6, 13, 14 and 18).

Among the 31 clinically evaluable patients who completed the therapy (mean treatment duration 93±60 days; mean follow up 12.7±7.9 months) 1 relapse with MDR ertapenem-resistant K. pneumoniae occurred, only; but 4 superinfections including 2 with carbapenem-resistant P. aeruginosa were noticed.

In comparison with patients receiving IV injections, C_{min} was significantly higher in patients with SC injections (mean 23.8 mg/L vs.17.4 mg/L for IV; p=0.029), as t_{1/2} was elongated in these patients (5.7 h vs.4.9 h for IV; p=0.034) (figure 2).

Prolonged subcutaneous high dose (1g/12h) of ertapenem as salvage therapy in patients with BJI was safe and efficient, but superinfections due to carbapenem-resistant pathogens could occur during the follow-up.

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