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O0694 Daptomycin versus glycopeptides in the treatment of osteomyelitis: results of a multi-centre retrospective cohort study

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Background: In spite of developments in the quality of medical care and antimicrobial therapy, chronic osteomyelitis is still associated with significant morbidity. Historically vancomycin or teicoplanin or linezolid may be indicated in the empirical and/or etiology based treatment of chronic osteomyelitis. Daptomycin is a cyclic lipopeptide with rapid, concentration-dependent bactericidal activity without cell lysis. It is highly effective against Gram-positive multidrug-resistant bacteria. In this multicenter retrospective cohort study, it was aimed to evaluate the outcomes of osteomyelitis cases who received daptomycin or glycopeptides (vancomycin or teicoplanin).

Materials/methods: This multicenter retrospective cohort study gathered data from seven centers from three geographic regions of Turkey. The study comprised adult osteomyelitis cases who received daptomycin including therapy (D cohort) until 2016 November. These cases were compared with a cohort who received glycopeptide (vancomycin or teicoplanin-G cohort) including therapy. Study inclusion criteria were as follows: a) Tissue and/or bone debridement culture yielded Gram-positive bacteria b) Magnetic resosnance imaging and/or direct X ray revealed osteomyelitis or biopsy pathologic examination resulted to be associated with osteomyelitis. Clinical success was defined as relieve of symptoms as well as inflammatory marker response.Chi-square and Student T tests were used for stat,st,cal comparison.

Results: A total of 72 patients, 38 cases in daptomycin group and 34 cases in glycopeptide group diagnosed with osteomyelitis fulfilling the study inclusion criteria, were included in the study. The clinical characteristics of the patients in the two treatment cohorts such as age, gender, the number of patients with chronic renal failure or diabetes mellitus, peripheric artery disease or venous failure or immunosuppression were similar in both treatment arms (Table). The most common etiologic agents were *Staphylococcus Aureus* (n:28) and Coagulase-negative *Staphylococcus* (n:11). Clinical success at the end of induction therapy was achieved in 32/38 cases in (D) cohort vs 30/34 cases in (G) cohort (p:0.73).

Conclusions: Although this is a limited experience in a small but well-defined cohort, our data suggest that daptomycin may be a safe alternative to glycopeptides in the treatment of osteomyelitis

cases. A randomized-controlled clinical study involving larger cohorts may increase the evidence available in relation to this question.

Table 1 Main results of the treatment cohorts.

	Daptomycin N:38 n (%)	Glycopeptides N:34 n (%)	p
Male	24 (63)	21 (62)	1
Female	14 (37)	13 (38)	1
Age	56.3 (±14.7)	54.6 (± 15.4)	0.602
Duration of therapy, mean days	35.1 (±22.7)	45.2 (± 27.4)	0.115
Diabetic foot infection	8 (21)	8 (24)	1
Long bone	0 (0)	3 (9)	0.10
Vertebral osteomyelitis	17 (45)	12 (35)	0.47
Posttraumatic osteomyelitis	2 (5)	4 (12)	0.41
Postsurgical osteomyelitis	11 (29)	7 (21)	0.41
Clinical response at the end of induction therapy	32 (84.2)	30 (88.2)	0.73