P0325 Oral versus standard antimicrobial treatment for native vertebral osteomyelitis

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Background: Native vertebral osteomyelitis (NVO) is slowly increasing in terms of incidence and is associated with a relevant proportion of disability and death. Evidences supporting clinicians in the choice of antimicrobial treatment, length and administration route are limited. Interest is growing on shorter antimicrobial regimens and oral treatment (OT), with the purpose of optimizing hospitalization length, side effects and costs.

Materials/methods: Single center retrospective observational study of consecutive patients affected by native vertebral osteomyelitis (NVO), from November 2008 to June 2018. NVO was defined by compatible sign and symptoms and typical radiologic findings. Exclusion criteria were: previous vertebral artificial implant placement, mycobacterial NVO, or NVO due to local dissemination (pressure ulcer or penetrating traumas). Diagnostic procedures included: basal full blood chemistry, blood cultures, contrast-enhanced MRI or CT scan, FDG-PET and when possible a vertebral biopsy/abscess drainage. OT was defined as administration ab initio of high-bioavailable antimicrobials per os. Standard treatment (ST) was defined as initial parenteral therapy followed by oral shift. Endpoint variable was failure at 12 months after end of treatment, defined as death or NVO persistence/recurrence. To assess impact of OT on failure we performed a multivariate analysis adjusted for the propensity score of receiving OT.

Results: Study population consisted of 220 NVO patients, 54 (24.5%) of them received OT. Treatment failure was observed in 29 (13.2%) patients. Comparison of OT and ST showed significant differences for fever (44.4 vs 62.0%, p=0.03), cervical site (13.0 vs 4.2%, p=0.05), positive blood cultures (45.7 vs 65.9%, p=0.03), fungal etiology (7.4% vs 0%, p<0.01), MDRO (0% vs 17.5%, p<0.01). Failure rates in OT and ST were 7.4% and 15.1% (p=0.17), respectively. At multivariate analysis independent risk factors for failure were rifampicin-based regimen (OR 0.36, 95%CI 0.14–0.95, p=0.04) and moderate-severe renal disease (OR 3.74, 1.34–10.41, p=0.01), while OT maintained a non-statistically significant protective effect (OR 0.74, 0.19–2.82, p=0.66).

Conclusions: OT with highly bioavailable drugs may be considered as effective as ST in most NVO patients, using rifampicin as a “backbone”.

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