Risk factors for antimicrobial-related serious adverse events during the treatment of complicated pyogenic spondylodiscitis

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INTRODUCTION and PURPOSE

The duration of antimicrobial therapy for pyogenic spondylodiscitis is not consensual. Treatment could be prolonged in case of complicated spondylodiscitis (highest risk of recurrence), exposing to antimicrobial (ATB)-related adverse events. The aim of our study was to determine the prevalence and risk factors for ATB-related serious adverse event (SAE) during the treatment of complicated pyogenic spondylodiscitis.

METHODS

Patient selection: all cases of complicated pyogenic spondylodiscitis (tuberculosis and brucellosis were excluded) in the database of the infectious diseases unit of our institution between 2007 and 2010 were included.

Clinical data collections: Retrospective collection from medical records using a standardized case report form.

Definitions: Complicated pyogenic spondylodiscitis were defined as host immunosuppression, spinal implant, local abscess and/or multidrug-resistant (MDR) pathogen. SAE were defined according to CTCAE 4.0. The SAE were considered to be ATB-related according to the treating physician or the pharmacist specialized in pharmacovigilance in doubtful cases.

Statistical analysis: Kaplan Meier curves and stepwise Cox proportional hazards model were performed to determine risk factors for the 1st ATB-related SAE.

RESULTS

Risk factors for Serious Adverse Events:

In multivariate Cox analysis,
- female sex (HR 3.2, 95%CI 1.2-8.8)
- subacute infection (HR 3.9, 95%CI 1.3-11.2)
- paravertebral abscess (HR 3.2, 95%CI 1.9-7.7)

OUTCOME: The median follow-up was 27±15 months. 1 death was directly attributed to the infection and 2 relapses occurred (overall success rate 95%).

CONCLUSION

In patients with complicated pyogenic spondylodiscitis, few patients experience a relapse, but ATB-related SAE are frequent. They are mainly dependent on host factors, such as gender and clinical presentation (subacute and with paravertebral abscess), rather than specific drug toxicity.

Studied population: 87 patients (50 males, 37 females) with a mean age of 62±15 years were included. The median Charlson score was 2±2.