

## Spondylodiscitis and endocarditis, the strange couple

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**Background:** The association between spondylodiscitis and infective endocarditis (IE) was first reported in 1965 but only a few data are available in the literature about this clinical picture. Early diagnosis of infective endocarditis as the source of spondylodiscitis is often difficult. The aim of this study was to evaluate the proportion of spondylodiscitis in patients with IE and to determine its clinical features.

**Methods:** We retrospectively analyzed 355 consecutive patients (127 women) admitted to our department with definite diagnosis of IE. Mean age was 65 years (SD 15.3). IE occurred on native valves in 223 patients (63%) and it involved the aortic valve in 191 cases (54%), mitral valve in 138 cases (39%) and tricuspid valve in 26 (7%). Spondylodiscitis occurred in 24 patients (7%). The diagnosis of spondylodiscitis was made on the basis of typical clinical and radiologic signs. Long-term follow-up was obtained by structured telephone interviews. Average duration of follow-up was three years. Primary endpoint was to establish clinical features of patients with IE complicated by spondylodiscitis.

**Results:** At univariable analysis spondylodiscitis was associated with male sex ( $p=0.043$ ), diabetes ( $p=0.049$ ), drug abuse ( $p=0.017$ ) and enterococcus infection ( $p=0.043$ ). At multivariable analysis diabetes ( $p=0.014$ ) and drug abuse ( $p=0.006$ ) were independently correlated with the presence of spondylodiscitis. Other clinical features were not associated with the presence of spondylodiscitis (age, BMI, chronic renal failure, paravalvular extension of infection, vegetation length, EuroScore 2, PCR and procalcitonin levels, type of valve infected). Mortality was similar between patients with and without spondylodiscitis.

**Conclusions:** The association of spondylodiscitis and infectious endocarditis should always be suspected, especially in patients with a high risk profile. Hence, patients with spondylodiscitis should be submitted to echocardiography, mainly when the infective organism is an Enterococcus. Conversely, patients with IE should undergo screening for metastatic infection.