

Abstract #050.docx

Surgical stabilisation improves survival of spinal fractures related to ankylosing spondylitis

Study Design: National registry cohort study

Objective: To investigate the effect of surgical stabilisation on survival of spinal fractures related to ankylosing spondylitis (AS).

Summary of Background Data: Spinal fractures related to AS are associated with considerable morbidity and mortality. Still hard data on treatment modalities and survival is missing and limited to retrospective studies.

Methods: In the Swedish patient registry of (SPR) all patients treated in an inpatient facility are registered prospectively with diagnosis and treatment codes. The mortality registry collects date and cause of death for all fatalities. Registry extracts of all patients with AS and spinal fractures including date of death and treatment were prepared and analysed for epidemiological purposes.

Results: 11008 individual patients with AS were admitted to treatment facilities in Sweden between 1987 and 2011. 943 patients with AS (age 66 ± 14 years) had 1031 spinal fractures, of which 466 affected cervical, 333 thoracic, and 232 lumbar vertebrae. 9.3% had multiple levels of injuries during the observed period. Surgically treated patients had a greater survival than those treated non-surgically (HR=0.80, $p=0.0429$). Spinal cord injury was the major factor contributing to mortality in this cohort (HR=2.53, $p<0.0001$). The survival of spinal fractures related to AS showed an annual improvement of 3% over the observed time period ($p<0.001$). The proportion of surgically treated spinal fractures increased linearly during the last decades ($r=0.90$, $p<0.001$) and has been about 53% through the observed years.

Conclusions: Spinal cord injury threatens the survival of patients with spinal fractures related to AS. Despite the complications related to surgical treatment, the survival of spinal fractures related to AS was improved by surgical stabilisation. Therefore surgical treatment can be recommended.