



COGNITIVE IMPAIRMENT IN ANKYLOSING SPONDYLITIS PATIENTS - A CASE-CONTROL STUDY

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BACKGROUND

Ankylosing spondylitis (AS) is a chronic, progressive and inflammatory disease that commonly affects the vertebrae and the sacroiliac joints, causing pain and loss of mobility. Extra-articular manifestations vary widely in terms of both frequency and severity. In addition, recent studies have suggested that neurological manifestations might be more frequent than expected in autoimmune rheumatological diseases. Little is known about the potential systemic effects of AS on the nervous system.

MATERIALS AND METHODS

A cross-sectional and case-control study was performed including consecutive AS patients seen in a rheumatology outpatient clinic of referral tertiary hospital. The control group included 33 healthy subjects. We registered clinical and demographic data including age, sex, level of education, time of disease, time of diagnosis, drugs in use, cardiovascular risk factors and other comorbidities. Functional capacity was assessed using the Health Assessment Questionnaire (HAQ). Neurological appraisal was made with standardised questionnaires: Brief Cognitive Screening Battery (BCSB), Montreal Cognitive Assessment (MoCA), Clinical Dementia Rating (CDR) and the Hospital Anxiety and Depression (HAD). Analysis of the data was performed using chi-square and t-tests and a multivariate analysis (SPSS 22.0). Significance level was set as <0.05 .

RESULTS

We included 35 patients (17 were female) with a mean age of 53.1 (± 13.9) years; among these patients, almost all were under biologic therapy. The mean age of AS diagnosis was 41.9 (± 13.9) years. In both univariate and multivariate analysis, compared to the control group, patients with AS presented significant lower BCSB, MoCA and CDR scores ($p < 0.05$). Surprisingly, adjusting for level of education, just 12 and 8 patients presented normal BCSB and MoCA scores ($p < 0.01$), respectively. The most affected domains were attention, delayed recall and executive functions. Cognitive decline was associated with higher HAQ scores (functional outcome due to AS) ($p < 0.05$) but not with prolonged time of disease. No correlation was found between sex, disease-modifying antirheumatic drugs, HLA-B27, C-reactive protein and levels and the neurological impairment. The mean HAD score was 12.4 (± 8.7) and anxiety and depression were more prevalent in AS patients than in control group ($p < 0.01$).

CONCLUSION

This is the first study that evaluates cognitive impairment and neuropsychiatric effects of AS. Clinicians must be aware that patients with AS may have neurological manifestations of the disease. Further studies are encouraged to clarify the bond between the brain and AS.