Neurological complications of ankylosing spondylitis: neurophysiological assessment.

Khedr EM1, Rashad SM, Hamed SA, El-Zharaa F, Abdalla AK.

Abstract:

Abstract Studies examined the neurological involvement of ankylosing spondylitis (AS) are limited. This study aimed to assess the frequency of myelopathy, radiculopathy and myopathy in AS correlating them to the clinical, radiological and laboratory parameters. Included were 24 patients with AS. Axial status was assessed using bath ankylosing spondylitis metrology index (BASMI). Patients underwent (a) standard cervical and lumbar spine and sacroiliac joint radiography, (b) somatosensory (SSEP) and magnetic motor (MEP) evoked potentials of upper and lower limbs, (c) electromyography (EMG) of trapezius and supraspinatus muscles. Patients' mean age and duration of illness were 36 and 5.99 years. Bath ankylosing spondylitis metrology index mean score was 4.6. Twenty-five percent (n = 6) of patients had neurological manifestations, 8.3% of them had myelopathy and 16.7% had radiculopathy. Ossification of the posterior (OPLL) and anterior (OALL) longitudinal ligaments were found in 8.3% (n = 2) and 4.2% (n = 1). About 70.8% (n = 17) had >or=1 neurophysiological test abnormalities. Twelve patients (50%) had SSEP abnormalities, seven had prolonged central conduction time (CCT) of median and/or ulnar nerves suggesting cervical myelopathy. Six had delayed peripheral or root latencies at Erb's or interpeak latency (Erb's-C5) suggesting radiculopathy. Motor evoked potentials was abnormal in 54% (n = 13). Twelve (50%) and five (20.8%) patients had abnormal MEP of upper limbs and lower limbs, respectively. About 50% (n = 12) had myopathic features of trapezius and supraspinatus muscles. Only 8.3% (n = 2) had neuropathic features. We concluded that subclinical neurological complications are frequent in AS compared to clinically manifest complications. Somatosensory evoked potential and MEP are useful to identify AS patients prone to develop neurological complications.

Published In:

Rheumatol Int. 2009 Jul; 29(9), 1031-40.