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Review

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PAIN IN MULTIPLE SCLEROSIS

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Summary

Multiple sclerosis (MS) is a disease of the central nervous system (CNS), beginning most often in late adolescence and early adult life and expressing itself by recurrent attacks of spinal cord, brainstem, cerebellar, optic nerve and cerebral dysfunction, the result of foci of destruction of myelinated fibers. Neuropathic pain, such as trigeminal neuralgia might be one of the first symptoms of multiple sclerosis.

In this retrospective study we evaluated 290 patients who have been hospitalised at Department of neurology in last three years.

According to the results of our study 70% had either an acute or chronic pain syndrome at some time during their disease.

Between them 2.7% with acute pain syndroms had episodes of paroxysmal pain attacks in distribution of trigeminal nerve.

Chronic pain syndromes, occurred in 58% of patients and included headache (25%), low back pain (35%) and painful leg spasms in 20% of patients.

Our patients were treated with nesteroid antireumatic drugs in case of nociceptive pain, but neuropathic pain was treated with combination of antidepressive and antiepileptic drugs.

Key words: multiple sclerosis; chronic pain symptoms.

INTRODUCTION

Multiple sclerosis (MS) is an inflammatory, demyelinating disease of the central nervous system. MS most commonly afflicts people aged 18-50 years, but

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any age group can be affected. The disease can present in different forms, such as primary progressive, relapsing remitting, relapsing progressive and secondary progressive types [12].

MS may present in various forms. Some patients have a predominance of cognitive changes, while others present with prominent ataxia, hemiparesis or paraparesis, depression or visual symptoms. Bipolar disorder and frank dementia may appear late in the disease course, but sometimes are found at the time of initial diagnosis [3].

Over a variable period, usually measured in years, the patient becomes increasingly handicapped, with an asymmetric paraparesis and obvious signs of corticospinal tract disease, sensory and cerebellar ataxia, urinary incontinence, optic atrophy, nystagmus, dysarthria and various sensory signs including signs of paresthesias and dysesthesias [12].

Although pain is not considered a typical symptom of MS, more than 50% of patients present with pain syndromes [4,5]. Most of them do not receive appropriate treatments, as clinicians are more oriented towards controlling the immuno-pathogenic process of the disease than coping with symptomatic consequences of the lesion.

The aim of this study was to assess the incidence and type of pain symptoms in MS patients. In the study 290 consecutive patients with Clinically definite MS, according to Mc Donald's criteria were evaluated by questionnaire.

MATERIAL AND METHODS

In this study we included 290 patients who had clinically definite MS according to Mc Donald's criteria as well as brain MRI which strongly suggested the MS. All patients have been hospitalized at Department of neurology, University hospital «Sestre milosrdnice», Zagreb in the period between 2005-2009 years. To determine the prevalence and nature of pain in multiple sclerosis, we evaluated by chart review 290 patients followed in Department of neurology.

RESULTS

In our study we enrolled only patients with definite diagnosis of MS according to Mc Donald's criteria. The results pointed out that two hundred and four patients (70%) suffered either of acute or chronic pain syndromes at some time during their disease. Between them 12% had acute pain which included trigeminal neuralgia in 8 patients (2.7%), Lhermitte's sign in 35 patients (12%) and the rest of them experienced painful tonic spasm.

Chronic pain syndromes occurred in 58% of MS patients. Most common were dysaesthetic extremity pain (25%), low back pain (30%), painful leg spasm (20%) and headache in 25% of MS patients.

There were no correlation with age, sex and duration of the disease.

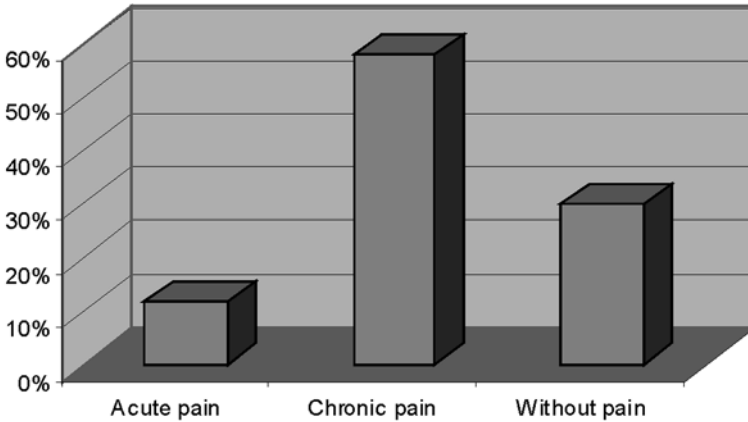


Fig 1. The prevalence of acute and chronic pain

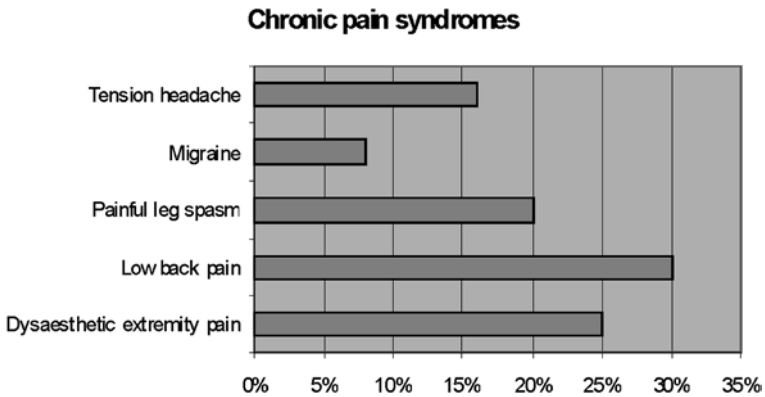


Fig 2. The most frequent pain syndromes in MS patients

DISCUSSION

Pain is common in patients with MS, but estimates of its prevalence have varied widely. Acute pain syndromes have duration of less than one month, whereas chronic pain syndromes last longer than one month. The frequency of pain during the course of the disease is approximately 45% to 65% [7].

In our study we found out that 15% of MS patients had experienced some kind of acute pain while 58% MS patients had chronic pain.

The most common acute pain syndromes were paroxysmal pain attacks in trigeminal nerve, Lermite's sign and painful spasms. Chronic pain syndromes occurred in 58% of MS patients and included headache (25%), low back pain (30%) and dysaesthesias in the limbs in 25% of patients.

We didn't find any correlation with age, sex, and duration of disease, but the results pointed out that the pain symptoms were more frequent in MS patients with higher EDSS score and the spinal cord involvement.

The results of our study are similar as results of other similar studies [8-10].

The mechanism of pain in MS has not yet been defined, because it can result from somatic, visceral, emotional or neurologic impairment. The importance of this classification is related to different medical approaches to treat the pain in MS patients.

The choice of pharmacologic therapy in the treatment of pain in MS depends on the nature of the syndrome. There is considerable overlap in that some agent may be helpful in both acute and chronic syndromes.

The best choice for treating acute pain syndromes are anticonvulsant medications and tricyclic antidepressants. Carbamazepin is the most prescribed drug, but gabapentin and pregabalin at the moment are recommended [9].

Chronic syndromes, such as burning dysesthetic extremity pain are difficult to treat but may respond better to gabapentin and phenytoin.

Not infrequently patients with MS may suffer from severe breakthrough pain. When this occurs, the use of narcotics is reasonable and may be necessary to bring the pain cycle under control.

Some patients develop refractory pain syndromes that require the expertise of a physician who specializes in the treatment of chronic pain [11-13].

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Sažetak

Bol u multiploj sklerozi

Multipla skleroza je kronična, demijelinizirajuća bolest koja se najčešće javlja u osoba mlađe životne dobi. Smatra se da je pojava multiple skleroze rezultat međudjelovanja genetskih i čimbenika okoliša. Dugo se smatralo da multipla skleroza nije povezana s pojavom boli, iako su rezultati istraživanja pokazali da neuropatska bol, poput neuralgije trigeminusa može biti jedan od prvih simptoma bolesti.

Cilj ovog istraživanja bio je utvrditi prevalenciju i periodu bolnih stanja u bolesnika oboljelih od MS-a, a koji su bili liječeni na Klinici za neurologiju, KB «Sestre milosrdnice». U vremenskom periodu od tri godine obuhvatili smo 290 bolesnika. Od akutnog ili kroničnog bolnog sindroma patilo je 70% pacijenata. Dvanaest pacijenata (2.7%) s akutnim bolnim stanjem imalo je paroksizmalne bolne atake u području trigeminalnog živca. Kronični bolni sindrom dijagnosticiran je u 58% bolesnika i uključivao je razne oblike glavobolje (20%), bol lumbosakralnom dijelu kralježnice (20%) te bolne spazme u 4% bolesnika.

Bolesnici su liječeni nesteroidnim antireumaticima u slučaju nociceptivne boli. Neuropatska bol je liječena adjuvantnim lijekovima, najčešće kombinacijom antiepileptika i antidepresiva.

Na temelju rezultata ove retrospektivne studije vidljivo je da su akutni i kronični bolni sindromi prisutni u velikom broju bolesnika oboljelih od MS-e te da terapija svakog bolesnika mora biti individualizirana.

Ključne riječi: multipla skleroza; kronični bolni sindrom.