Conclusions: The factors that are in direct relations with exacerbation of MS in our study are: season, residence and age.

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Intrathecal IgM synthesis in children with multiple sclerosis is associated with a slower progression

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Background: Intrathecal IgM synthesis has been associated with the onset of new relapses and an earlier onset of secondary progressive disease in adult multiple sclerosis patients.
Objective: Investigation of the predictive value of intrathecal IgM by correlation of recent interpretations of CSF data with clinical information from pediatric MS patients.
Methods: Seventy-two children with onset of MS before age of 16y were followed for a mean period of 10.3 years (range: 0.4–22.8 years) evaluated as two groups with ($n = 44$) or without intrathecal IgM synthesis ($n = 28$). Clinical course and EDSS scores at five and 10 years were compared with CSF data interpreted with a non-linear program for statistics of groups in CSF/serum quotient diagrams.
Results: In general, female gender, total number of attacks, number of attacks in the first 2 years and the time interval between first and second attack were associated with a worse prognosis. The cohort of children without intrathecal IgM had a significant higher number of relapses in the first 2 years ($P = 0.033$) with a trend to shorter time intervals between first and second attack and a higher EDSS score after 10 years of MS, though not statistically significant. In the subgroup of girls without intrathecal IgM EDSS score after 10 years was significantly higher compared to the group with IgM synthesis ($P = 0.023$). The contradiction to earlier reports is explained as a bias in the qualitative method or interpretation with a linear IgM Index.
Conclusion: Intrathecal IgM synthesis at time of first clinical manifestation was associated with a slower progression of disability in pediatric MS.

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The role of conventional MR imaging in diagnosing multiple sclerosis

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Conventional MR as an important paraclinical tool for diagnosing multiple sclerosis (MS) and monitoring therapeutic trials offers by far the most sensitive technique for detecting MS lesions.
Its purpose is especially important in ruling in or ruling out a diagnosis of MS. The ability to detect lesions depends on the pulse sequence, imaging parameters and the field strength.
There is a special MR protocol which has to be performed with application of gadolinium contrast media in order to increase the sensitivity and specificity of conventional MR examination since the lesion number and location are included in the diagnostic criteria of MS.
Although MS lesion plaques can be found throughout the brain, spinal medulla, orbit and cranial nerves, they usually have specific features which help to distinguish MS from other demyelinating, cerebrovascular diseases or any other diseases that affect white matter of the brain. Conventional MR is also helpful in distinguishing MS variants and subtypes.
Although conventional MR is a powerful paraclinical technique to depict MS lesions, one should bear in mind that there are cases of MR-negative MS. Therefore, to obtain the diagnosis of MS it is necessary to synthesize the results of clinical exams, laboratory tests and all the paraclinical exams as well as their changes in time.

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Similarity and difference among multiple sclerosis group during psychiatric controls

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Introduction/Objectives: The main of this research was to show what kind of sociodemographic and clinical differences were among the multiple sclerosis during psychiatric controls.
Participants, Materials/Methods: Every of age patient with multiple sclerosis (MS) who was control by psychiatrists at Polyclinic of CHC Rijeka during Mart 2009 was included in this study. The wide sociodemographic and clinic facts were registered in the polyclinical patients card boards.
Results: During Mart 2009 there were 8 patients (m-3, f-5) on their regular controls. Six or 75% of them were more than 40 year old. In 5 or in 62.5% of them MS were diagnosed later. About 87% of them worked longer than 20 years and they were on sick leaves longer than 10 years but 6 or 75% of them contacted with irritant materials on their work places. Mainly of them (6 or 75%) suffered from depression. Only one of them was born in Gorski kotar (the part of Croatia with high incidence for MS) and only one of them had the positive familiar anamnesis according to MS.
Conclusions: The persons with MS often suffered from depression. About 75% of them contacted with irritant materials during their long work time.

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Magnetic resonance of white matter lesions

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Introduction: Differential diagnosis of white matter lesions (WML) is quite extensive and includes hypoxic-ischemic origin, inflammation, infection, toxic or metabolic agents, trauma, hereditary diseases or even normal aging. One of the most common questions to be answered is: do the lesions represent multiple sclerosis? At the moment there is no single MRI technique that could unambiguously answer this question.
The aim of the study is to get acquainted with possibilities of conventional magnetic resonance imaging (MRI) in detection, characterization and differentiation of white matter lesions.
Materials and methods: 1T or 1.5T MRI scanner were used to examine the patients suspected for WML and images were acquired according to the standard protocol at our institution.