Oral Presentations

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Neurological consequences of delay treatment in early relapsing-remitting multiple sclerosis. A five-year follow-up study

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Objective: To study if there are differences in the disability at five-year of multiple sclerosis patients when interferon treatment is iniciated earlier. ***Method:*** Patients with a first event suggestive of multple sclerosis were recruited. In patients visited between January 1996 to December 1998 (group A) a minimun of one year after a stablished diagnosis according the Poser criteria (CDMS) must be accomplished to begin treatment with interferon. And in patients visited from January 1999 to April 2001 (Group B) this year of delay as CDMS was eliminated. We have analysed the impact over the disability at year five of the application of these criteria. ***Results:*** 65 patients accomplished the criteria to begin treatment; 28 in the group A, and 37 in the group B. Mean time to CDMS was similar in both groups (11.0 months). Mean time to begin treatment was 16.0 and 7.3 months (group A and B). Total time under IFNB was 33.0 and 40.7 (group A and B). The final median EDSS for patients treated in the group A was 3.0 vs. 2.0 in patients treated in the group B ($p < 0.000$). The time to reach an EDSS of 3.0, was lower for patients of the group B (Hazard ratio 7.4, $p = 0.0003$). ***Conclusions:*** Earlier treatment had a favorable impact over the disability in the first five years of evolution of RRMS.

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Betainterferons in the treatment of multiple sclerosis: a naturalistic survey

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Background: Controlled clinical trials have shown that beta-interferons are effective and moderately well tolerated in the treatment of multiple sclerosis (MS). The annual costs of the treatment are, however, substantial. To date, reports of the efficacy and tolerability of beta-interferons in unselected MS patient populations are scarce. ***Objectives:*** To evaluate retrospectively the efficacy and tolerability of beta-interferons in an unselected MS-cohort. ***Subjects and Methods:*** The data was collected of 96 consecutive patients with relapsing- remitting MS (RRMS) treated at the Tampere University Hospital, Finland between 1996 2003. ***Results:*** During beta-interferon treatment, the annual relapse rate declined in 66% of the patients. The total number of relapses was reduced by 58% compared to the time prior to the treatment. Adverse effects were experienced by 80% of the patients. Altogether 28% of the patients switched to another beta-interferon product during the follow up. The main reason for change of a product was lack of efficacy. ***Conclusions:*** Beta-interferons are efficacious and well tolerated by most of the RRMS-patients. However, one third of the patients seem to obtain no benefit from the treatment and adverse effects can be common. Thus, the effects of beta-interferon treatment should be carefully monitored and the value of the therapy should be always individually assessed.

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The Global Adherence Project – A multicentre observational study on adherence to disease-modifying therapies in patients suffering from relapsing-remitting multiple sclerosis

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Background and Objectives: Adherence is a key component in the therapy of chronic diseases. The Global Adherence Project (GAP) is the largest global, observational study that has evaluated real-world adherence rates to approved disease-modifying therapies (DMTs) for relapsing-remitting multiple sclerosis (RRMS), factors influencing adherence, quality of life and level of cognition and depression. ***Design/Methods:*** Eligible RRMS patients were >18 years old and on their current DMT for at least six months. 179 sites across 22 countries recruited patients in this retrospective paper-based survey. Neurologists completed a practice-related survey and patients completed a patient survey plus the Multiple Sclerosis International Quality of Life Questionnaire (MusiQoL) and the Multiple Sclerosis Neuropsychological Screening Questionnaire (MSNQ, in English-speaking countries). Non-adherence was defined as missing at least one DMT injection or changing dose within 4 weeks prior to the survey. ***Results:*** 2646 patients treated with Avonex, Rebif, Betaferon/Betaseron or Copaxone had a mean age of 40 years, 73% were female, median disease duration was 6 years, and median time on treatment was 32 months. Overall, 25.3% of patients reported non-adherence. The non-adherence rate was significantly lower for Avonex (15.0%) than for Rebif 22 mcg (22.0%, $p = 0.012$), Rebif 44 mcg (27.3%,) Betaferon/Betaseron (30.9%), and Copaxone (34.2%), all $p < 0.0001$. The most common reason for non-adherence was forgetting to administer the injection (50.6%). Other univariate factors that affected adherence included duration of current DMT ($p = 0.017$) and duration of disease ($p = 0.0004$). Adherent patients had higher MusiQoL scores in 7 of 9 dimensions (indicating better QOL; $p < 0.05$), fewer cognitive problems (MSNQ, $p = 0.0002$) and fewer problems with injection-site reactions ($p < 0.01$) than non-adherent patients. Full multivariate analyses will be conducted on all primary factors that impact adherence. ***Conclusions:*** Several univariate factors including current DMT used, duration of current DMT and disease duration affected adherence to therapy. Adherent patients reported better quality of life, less cognitive impairment and fewer problems with injection site reactions than non-adherent patients.

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Incidence and impact of neutralising antibodies in a clinical setting

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Background: In pivotal trials the frequency of neutralizing antibodies (Nabs) against different interferon Beta products have varied from 7% to 41%. Most Nabs appear between 12 and 24 months of treatment. Previous studies have suggested that Nabs reduce the therapeutic benefit of interferon Beta in multiple sclerosis (MS) patients. From this it has been suggested that poor clinical evolution should mandate Nab testing. ***Objective:*** To evaluate prospectively in a clinical setting the relative incidence of Nabs to the four interferon Beta products and their impact on clinical evolution. ***Methods:*** From July, 2004 all MS patients at our clinic, independent of clinical status, who have received interferon Beta treatment for more than one year were tested for Nabs using an antiviral cytopathic effect (CPE) assay. A titer of ≥ 20 LU/ml was considered the threshold for positivity. ***Results:*** Over a 22 months period 111 patients were tested at our clinic. 14% ($n = 16$) overall tested positive. These patients had as a group a median duration of treatment of 3 years (0.8), a median EDSS of 1.0 (0.3) and a median annual relapse rate of 1 (0.4). Using a Wilcoxon Mann-Whitney test, we were not able to demonstrate a significant evolution in EDSS between baseline and the year testing positive for Nabs (median difference:1, 95% CI: 1.1; $p = 0.281$). Similarly, no significant evolution could be demonstrated in the number of relapses (median difference: 0, 95% CI: 1.1; $p = 0.660$). The relative incidence per product was: Avonex 5.0%, Rebif 26.0% and Betaseron 9.0%. ***Conclusions:*** The incidence of Nabs at our clinic is less than previously reported in the pivotal trials. We could not demonstrate any impact on clinical evolution and thus could not have predicted Nab positivity from it.