

PPN10

SURVIVAL AND NURSING HOME FREE SURVIVAL (NHFS) OF AD PATIENTS

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OBJECTIVE: To model survival and NHFS of Alzheimer Disease (AD) patients. To justify the Mini-Mental Status Examination (MMSE) score as an important predictor of patient survival and nursing home utilization. **METHODS:** Survival models were applied to analyze the Minimum Uniform Data Set (MUDS), developed and maintained by Alzheimer Research Centers of California (ARCC). The study sample included 3150 AD patients, who enrolled in ARCC between Oct. 1992 and Jan. 1999. Cox regression models with and without time-dependent covariates were used in the analysis. Results were adjusted by comorbidities. **RESULTS:** The MMSE score was shown to be a strong predictor of both AD patients' survival and NHFS. One-unit increase of MMSE score (on a 30-point scale) corresponds to a 5.5% hazard reduction. That is to say, if a patient's 5-year survival probability is 0.500, with his MMSE score increased by one unit, the probability will be increased to 0.520. One unit increase of MMSE also corresponds to 6.4% hazard reduction in future nursing home utilization, which means a NHFS probability of 0.500 will be increased to 0.523. Female, black, and Hispanic had higher survival probability. Older age, longer education, and history of major psychosis in patient's primary relatives caused lower survival rate. Marriage and female gender increased NHFS; high value in Body mass index decreased NHFS. All the above results were significant at 0.01 or 0.05 level. **CONCLUSIONS:** The study showed MMSE was a strong predictor of patient survival and NHFS. Further study should be conducted to explore the possibility that MMSE score can be used as a clinical indicator for treating AD patients. It is also interesting that, older age doesn't have significant impact on NHFS although it is a strong predictor of survival. On the other hand, marriage has a significant impact on NHFS, but not on survival.

PPN11

THE MIGRAINE IN FRANCE IN 2000: EPIDEMIOLOGICAL DATAHenry P¹, Auray JP², Duru G³, Chazot G³, Dartigues JF⁴, Lanteri-Minet M⁵, Lucas C⁶, Pradalier A⁷, El Hasnaoui A⁸, Gaudin AF⁸

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OBJECTIVE: A French national epidemiological study on migraine was presented 10 years ago at the Migraine

trust. It was the first study to cover an entire country (HENRY P. et al.: Migraine prevalence in France. In *New advances in headache research*: 2. Ed. Clifford Rose 1991 Smith Gordon—pp. : 11–14). This study has provided also data on the burden of migraine in terms of its economic and social impact. We would like today to update the data. **METHODS:** 1486 persons, aged over 15 and suffering from headaches were randomly selected from a large representative sample of the French population. They were asked to complete a questionnaire, which allowed discriminating sufferers of migraine according to IHS criteria. **RESULTS:** Among the 1486 headache sufferers, we find 880 migrainous people (1-1, 1-2 and 1-7 IHS criteria), 454 without migrainous headache and 152 with chronic daily headache. If we compare the results of the certain migraine group (1-1 and 1-2 IHS) we find that they are identical (8,1% (1989) versus 8,2% (1999)). However, if we include the migrainous disorder group fulfilling all criteria but one (1-7 IHS), the prevalence rate for migraine headache in France between 1989 and 1999 seems to show a clear increase, rising from 12,1% to 17,3% because of less restrictive criteria than those applied ten years ago. Regarding the prevalence in general population for chronic daily headache the rate is around 3% with 1,8% for men and 3,9% for women in 1999.

PPN12

DIFFERENCES IN HEALTH-RELATED QUALITY OF LIFE BETWEEN MIGRAINEURS WITH AND WITHOUT PROPHYLACTIC MEDICATION USE

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In a previous study, sumatriptan therapy was associated with improvements in Health Related Quality of Life (HRQoL). Using the same population, the present study explores additional changes in HRQoL between patients who did and did not receive migraine prophylaxis medication. **OBJECTIVES:** To compare the difference in HRQoL of migraineurs who did and did not receive migraine prophylactic medication. **METHODS:** A retrospective database analysis was conducted using pharmacy claims and HRQoL data. Study patients were from a managed care organization, were diagnosed with migraine, and were initiated on sumatriptan (baseline). The SF-36 and Migraine-Specific Quality of Life Questionnaire-Version 1.0 (MSQ) surveys were administered at baseline, 3 and 6 months after initiation of sumatriptan. Patients were identified for the prophylaxis group if they received any medication from a previously developed list of possible migraine prophylaxis medications: 1) within 30 days prior to baseline and 2) at least 4 out of the 6 months after baseline. A two-way repeated measures ANOVA was performed comparing differences in HRQoL between the groups from baseline to 6 months. **RESULTS:** Of 178 patients, 40 were in the prophylaxis group and 138 in the non-prophylaxis group. Statistically significant increases were found in the MSQ Role Function-Restricted

tive, and the SF-36 Role-Physical, Bodily Pain domains in the non-prophylaxis group compared with the prophylaxis group (p-value <0.05). A statistically significant increase was found in the SF-36 Physical Functioning domain in the prophylaxis group compared with the non-prophylaxis group (p-value <0.05). **CONCLUSION:** Although sumatriptan has been shown to improve HRQoL of migraineurs, concurrent use of prophylaxis medication for migraineurs shows mixed results of any additional benefit in HRQoL.

PPN13

DELAYS IN NURSING HOME PLACEMENT FOR PATIENTS WITH ALZHEIMER'S DISEASE ASSOCIATED WITH TREATMENT WITH DONEPEZIL MAY HAVE HEALTH CARE COST-SAVING IMPLICATIONS

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OBJECTIVES: Donepezil, an anti-dementia drug, has been associated with delays in nursing home placement (NHP) for patients with Alzheimer's disease (AD). This analysis explores the health care cost-saving implications of such treatment. **METHODS:** Information on the dates and reasons for NHP was obtained through follow-up interviews with caregivers and chart reviews of 763 AD patients who participated in three randomized, double-blind, placebo-controlled clinical trials and two subsequent open-label studies of donepezil. Patients were categorized according to their experiences in utilizing donepezil during the clinical trials and extension studies. Cox proportional hazards models (adjusted for age, gender, baseline Mini-Mental Status Examination scores, caregiver status and post clinical study use of cholinesterase inhibitors) were used to estimate adjusted survival functions from which median times to NHP were estimated for each donepezil use category. Analyses of the relationship between donepezil use and time to NHP were completed for both first dementia-related placement (data reported here) and for permanent placement (data similar). Standard nursing home cost data were applied to these results. **RESULTS:** For the least exposure group (dose <5 mg/day and/or used drug for less than 8 weeks total; n = 95), the median time to first dementia-related NHP was 43 months. Compared with this group, patients who received at least 5 mg/day of donepezil for 8 weeks or more had a significantly (p < 0.05) longer time to first dementia-related NHP. For patients who received donepezil for at least 36 weeks (12 weeks of double blind and 24 weeks of open-label treatment, for example), the median time was 73 months to first dementia-related NHP (RR = 0.458, p < 0.01). **CONCLUSIONS:** Because nursing home care has been reported as the principal cost driver in the care of AD patients, these delays to the time of entry into a nurs-

ing home associated with donepezil treatment may have important health care cost-saving implications.

PPN14

A PROGNOSTIC MODEL TO PREDICT QUALITY OF LIFE CHANCES AFTER SUBARACHNOID HEMORRHAGE

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OBJECTIVES: Traditionally, mainly survival chances are considered at clinical decisions before major operations. This study looked at the potential ability of the most commonly used pre-operation estimators to predict health related quality of life of subarachnoid hemorrhage (SAH) patients one year after surgery. **METHODS:** 173 patients underwent intracranial aneurysm surgery within 72 hours after SAH at the National Institute of Neurosurgery in 1998 and 1999. Before surgery health status assessment included Hunt-Hess (HH) grade as a measure of neurological status, ASA physical status score, and CT examination that determines the presence of intracerebral hemorrhage (ICH) and Fisher scale. 12 months after the surgery, patients were interviewed either by phone or post by using the EQ-5D generic quality of life questionnaire. The relationship between the pre-operation health status/risk estimators and one-year QoL values was examined by differences in mean EQ-5D index values and by developing a regression model. F-statistics and student-t tests have been used to test statistical significance. **RESULTS:** Patients with ICH had lower EQ-5D index values (0.32 vs. 0.70, p < 0.001). Patients with Fisher scores >3 had lower QoL than those with scores below (0.35 vs. 0.68, p < 0.001). HH grade >3 lead to lower QoL values (0.05 vs. 0.66, p < 0.001). Patients with ASA scores >2 had also significantly lower QoL (0.18 vs. 0.66, p < 0.001). Due to similar meaning and high correlation between ICH status and Fisher score, Fisher score was dropped from the prognostic model. Regression model included: EQ-5D index = 1.04 °V 0.38fx(ASA > 2) °V 0.24fxICH °V 0.30fx(HH > 3) °V 0.006fxAGE. The overall model showed an R² = 0.412, and p-value <0.001. P-values for individual coefficients were 0.0001, 0.0001, 0.0001, 0.002, and 0.012, respectively. **CONCLUSIONS:** Pre-operation health status/risk assessment can predict future quality of life to an important extent. It is argued that QoL chances should also be considered in addition to survival chances. These results can be useful in sub-group analyses in modeling studies.