PND2 ECONOMIC BURDEN OF DRUG USE IN PATIENTS WITH ALZHEIMER'S DISEASE AT PHRAMONGKUTKLAO HOSPITAL AND MEDICAL COLLEGE, THAILAND: A 5-YEAR TREND ANALYSIS

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OBJECTIVES: To determine the trend of drug utilization for Alzheimer’s disease during 2009 and 2013. METHODS: Prescription data of outpatients with Alzheimer’s disease in 2009 – 2013 was extracted from the medical care database of the hospital. Quantities and costs of the prescribed drugs were examined using defined daily dose (DDD) for comparisons. RESULTS: Number of patients was rather the same number, every year ranging from 1,507 to 1,631 patients. For donepezil and memantine, number of DDD per year was increased every year ranging from 7.3–10.0 % to 1.6–2.6 % every year ranging from 1,507 to 1,631 patients. For donepezil and memantine, the median number of DDD per patient was 11.2 in 2009 and 12.6 in 2013. CONCLUSIONS: The median daily use of donepezil and memantine increased from 2009 to 2013.

NEUROLOGICAL DISORDERS – Case Reports

PND5 ALZHEIMER’s DISEASE CAREGIVER BURDEN IN JAPAN AND THE S.E U

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OBJECTIVES: Alzheimer’s disease (AD) is a chronic and progressive disease that is a major public health burden on patient health status; however, there is limited research on caregiver burden in Japan. The objectives of this study were to examine Japan AD caregiver burden vs. non-caregivers and SE U AD caregivers. METHODS: Data were obtained from the 2012 Japan Alzheimer’s Disease Caregiver Survey (JADS) and 2013 SE U (UK, Germany, France, Italy, Spain, N =60,000) NHWS, administered online to a representative adult sample (18+ years). Respondents reported on health status (SF-36v2), activity impairment, health care utilization in the past six months and caregiver responsibilities. Multivariable regressions, adjusting for demographics and health history variables to explore differences between Japan AD caregivers (n=714) vs. Japan non-caregivers (n=27,702) and SE U AD caregivers (n=1,239). RESULTS: Japan AD caregivers were older and more educated than Japan non-caregivers (<p=0.05). Japan AD vs. SE U AD caregivers were older and more educated (<p=0.05). After adjustments, Japan AD caregivers had lower health status (<p<0.001), higher health care utilization, and greater activity impairment (<p<0.001) than Japan non-caregivers. Japan AD vs. SE U AD caregivers had better mental (45.7 vs. 43.8, <p<0.001) and physical (51.0 vs. 50.0, <p=0.021) health status, marginally less activity impairment (24.5% vs. 27.1%, <p=0.070) but more health care provider visits (7.6 vs. 5.4, <p<0.001) and hospitalizations (p<0.001). Japan AD caregivers vs. SE U caregivers were less likely to make treatment decisions and manage finances for AD relative (<p<0.001), were marginally less involved in helping with daily activities (transportation, cooking, laundry, shopping, p<0.05). Japan AD caregivers were less stressed and reported higher social support than SE U caregivers (p<0.05). CONCLUSIONS: Japan AD caregivers report more burden including more depression symptoms than Japan non-caregivers. Japan AD caregivers report higher general health care utilization than SE U AD caregivers, but report better health status and less involvement in treatment and finance decisions.

PND6 THE IMPACT OF MULTIPLE SCLEROSIS SEVERITY ON QUALITY OF LIFE, STRESS, DEPRESSION AND SOCIAL SUPPORT NEEDS

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OBJECTIVES: Multiple Sclerosis (MS) is a chronic disease which results in increasing disability over time. The Australian Multiple Sclerosis Longitudinal Study (AMSLS) is a research study that collects information on around 3,500 volunteers with MS from all States and Territories in Australia. The WHO quality of life assessment instrument (WHOQOL-100) was collected as well as the following Patient Reported Outcome (PRO) measures; MS Self-Efficacy Scale, Perceived Stress Scale, Geriatric Depression Scale – short version (GDS-5), Social Support Scale, Therapeutic Self-Care Scale, and the Depression Anxiety and Stress Scale (DASS). In this analysis, we quantified the difference in utility, stress, depression and social support needs between patients with MS and the general population. METHODS: Data from the WHOQOL-100 were collected in 2008. The utility score was calculated by mapping five questions from the WHOQOL-100 to the EQ-5D descriptive system as described by Al-Ruzzeh et al (2008). The UK TTO was used to determine the utility values applied to each level of the 3 utility levels in each dimension. Disease severity was based on the self reported Disease Steps Scale. RESULTS: A total sample of 2139 subjects provided evaluable data; 91% were diagnosed with multiple sclerosis. Overall average of approximately 19.6% of the population scored as having very severe (95%CI: 78.0% to 80.8%) 0.60 (95%CI: 0.58 to 0.61) and 0.42 (95%CI: 0.39 to 0.46) for mild, moderate and severe disease, respectively. OTHER conclusions include the following: CONCLUSIONS: Higher disease severity in subjects with MS is associated with lower utility and QOL and worse outcomes in general.
NEUROLOGICAL DISORDERS – Health Care Use & Policy Studies

PN10
ASSIGNMENT OF OUTPATIENT PHYSIOTHERAPY SERVICES IN DISEASES OF THE NERVOUS SYSTEM IN HUNGARY

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OBJECTIVES: The purpose of our study is to assess the frequency related to Diseases of the nervous system within out-patient care and determine the total health care expenses of them in Hungary in 2009. METHODS: CONCLUSIONS: Data were derived from the nationwidewide database of Hungarian National Health Insurance Fund Administration (NHIFA), based on official reports of outpatient care institutes. The percentage of items of treatment codes are listed in the chapter of the Guidelines of NHIFA for `Physiotherapists, massage-therapists, conductors and other physiotherapy practises. The diseases of the nervous system are listed in the International Classification of Diseases (ICD) with code of 000-239. RESULTS: Diseases of the nervous system account for 1.331.675 cases in the annual number of the physiotherapy-related activities (3231843 cases) showing an approximately 4.12% prevalence. The following top-10 medical procedure were responsible for 46.48% (465656) of total activities: individual treatment (7.79%), passive motion therapy on multiples limbs (6.24%), selective nerve stimulation therapy (5.89%), muscle strengthening exercise (5.82%), training for circulation improvement (4.6%), parts of the body per individual physiotherapy (4.19%), ergotherapy (3.78%), exercise to prevent cardiovascular complications (3.68%), Hand massage (3.33%), electrotherapy - facial nerve (2.96%). The total financial cost of all the physiotherapeutic treatments provided in diseases of the nervous system was 388 million Hungarian Forint (1.25 million Euro)

Nervous System & Policy

PN11
REVERSAL OF CHRONIC FATIGUE INDUCED ALTERATIONS BY SESAMOL IN MICE: EVIDENCE FOR INVOLVEMENT OF OXIDATIVE STRESS AND INFLAMMATORY PATHWAY

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OBJECTIVES: A wide body of literature suggest in vivo neuroprotective, antiinflammatory, anti-oxidative effects of sesamol, a protective agent against neuropsychiatric disorders. The purpose of our study is to elucidate the protective effect of sesamol in experimental model of chronic fatigue syndrome (CFS).

METHODS: Firstly, Sesamol was tested for its antidepressant potential in mouse models using forced swim test (FST) and tail suspension test (TST). Later, Sesamol was examined in mouse models of chronic stress fatigue induced by chronic forced swimming for 15 days. Brain biochemical [superoxide dismutase (SOD), glutathione-S transferase (GST), glutathione (GSH), lipid peroxidation and nitrite levels] and plasma cytokines [tumour necrosis factor α (TNF-α) and interleukin 6 (IL-6) levels were assessed to correlate the possible mechanism of action associated with fatigue symptoms. Further, adrenalin ascorbic acid measurement were done to correlate corticosterone levels. RESULTS: Mice administered with sesamol showed significant decrease in immobility time in acute FST and TST. Sesamol significantly attenuated progression of CFS in experimental model as compared to control. Sesamol also corrected the other cognitive deficits (locomotor activity, motor activity, memory retention, hyperalgesia) associated with CFS. Furthermore, it rectified the diminished levels of antioxidant enzymes such as SOD, GST and GSH in brain and altered levels of proinflammantory cytokines (TNF-α and IL-6). CONCLUSIONS: This finding suggests that anti-fatigue activity of sesamol against chronic induced fatigue in mice. The present outcome offers a therapeutic application of sesamol against CFS and also offers the scope for its development against neuropsychiatric disorders.

PN28
ACETYL-L-CARNITINE FOR THE TREATMENT OF PERIPHERAL NEUROPATHIC PAIN: A SYSTEMATIC REVIEW AND META-ANALYSIS

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OBJECTIVES: Acetyl-L-carnitine (ALC), an acetylative component in fatty acid metabolism, is considered a potential agent for peripheral neuropathy pain (PNP).

METHODS: We aimed to access the efficacy and safety of ALC for the treatment of patients with PNP. METHODS: We searched PubMed up to March 2014 for randomized controlled trials comparing ALC with placebo or other active medicines in diabetic and non-diabetic PNP patients. Two reviewers independently screened for eligible studies, assessed risk of bias, and extracted data. Mean difference (MD) and 95% confidence interval (CI) were used for pooling continuous data. RESULTS: Four RCTs compared ALC with placebo and reported in 3 articles (n = 523) were included. Compared with placebo, ALC significantly reduced Visual analogue Scale (VAS) of PNP patients (MD, 1.28, 95%CI, 0.93-1.64, P < 0.0001). In the subgroup analyses, ALC on VAS in AWF was similar in different administration route (intramuscular-oral sequential subgroup: MD, 1.19; 95% CI, 0.34-2.04; P = 0.006; oral only subgroup: pooled MD, 1.15; 95% CI, 0.33-1.96; P = 0.006), and ALC appeared more effective in PNP patients than non-PNP patients (diabetic subgroup: MD, 1.47; 95% CI, 1.06-1.87; P < 0.0001; non-diabetic subgroup: MD, 0.71; 95% CI, 0.01-1.43; P = 0.05). No severe adverse events related to ALC were reported. The adverse events were pain, headache, paraesthesia, hyperesthesia, tingling, biliary colic and gastrointestinal symptoms. The rate of adverse events were similar in ALC and control group. CONCLUSIONS: ALC could reduce VAS in PNP patients with acceptable safety. However, further trials with population and longer follow-up are required to confirm these findings.

PN9
AGE AND GENDER DISTRIBUTION OF OUTPATIENT CARE PHYSIOTHERAPY SERVICES FOR CARPELSAL Palsy AND OTHER PARALYTIC SYNDROMES IN HUNGARY

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OBJECTIVES: The aim of our study is to assess the utilization of outpatient care physiotherapy services related to cerebral palsy and other paralytic syndromes according to age and gender. METHODS: The data come from the financial data base of the National Health Insurance Fund Administration involving the year of 2009. The activity list was provided by the rulebook on the application of the activity code list in out-patient care. The Cerebral Palsy and other paralytic syndromes are listed in the International Classification of Diseases (ICD) with code of G00-G99. The number of cases in physiotherapy activities were determined per 10000 persons by age and gender in outpatient care, 2009. RESULTS: Diseases of the nervous system account for 1331675 cases in the annual number of the physiotherapy-related activities (3231843 cases) showing an approximately 4.12% prevalence. The prevalence of the Cerebral Palsy and other paralytic syndromes were 5% in the group of diseases of the nervous system. The average number of cases of physiotherapy activities per 10000 persons accounted for 433 cases in 2009. The average number of cases per 10000 persons for males and females were 508 cases for males and 364 cases for females. The physiotherapy specialty treated the youngest age group and 60-74 age groups in male and 70-84 age groups in female. CONCLUSIONS: The cerebral palsy and other paralytic syndromes at the diseases of the nervous system show high prevalence, indicating the importance of prevention.

PN12
TADALAFIL IN BENIGN PROSTATIC HYPERPLASIA: PROTOCOL FOR THE SYSTEMATIC REVIEW OF ADVERSE EVENTS

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OBJECTIVES: Benign prostatic hyperplasia (BPH) is an age related disorder, however its symptoms begin to appear in some men as early as age 40 years. As per estimates per every second person has BPH by the age of 60 and 90% of individuals develop BPH by 85 years. Tadalafil is a selective PDE5 enzyme inhibitor approved to treat men with BPH. The aim is to systematically review the medical literature for randomized control trial and identify the adverse events (AE) associated with tadalafil use in BPH. METHODS: All published randomized controlled trials (RCTs) comparing tadalafil with a placebo or active interventions for the treatment of BPH with or without any surgical intervention such as transurethral resection of prostate (TURP) were included. A systematic search of databases including PubMed, EMBASE, Cochrane Library, and Google Scholar was conducted for identifying the full-text manuscripts of all selected articles. Abstracts, titles and then the full-text manuscripts of all selected articles will be retrieved and assessed by two independent reviewers against the eligibility criteria. Disagreements on inclusion will be resolved through discussion. A pre-designed data extraction form will be used by two reviewers for the extraction of AE and other study findings. Cochrane risk of bias assessment checklist will be used for the risk of bias assessment of individual studies. Results will be presented as a narrative synthesis. Descriptive and quantitative data synthesis will be done for AE reported in all the studies. Meta-analysis will be performed using RevMan (v.5.0). RESULTS: Though there are several studies assessing tadalafil use for erectile dysfunction, a systematic review/meta-analysis of the evidence reporting its AE profile when used for