NEUROLOGICAL DISORDERS – Health Care Use & Policy Studies

PDN7
IMPACT OF COPAYMENT REDUCTION OR EXEMPTION PROGRAMME ON GENERIC DRUG UTILISATION: THE SPECIFIED DISEASE TREATMENT RESEARCH PROGRAMME IN HUNGARY

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OBJECTIVES: In Japan, the Specified Disease Treatment Research Programme provides copayment reduction or exemption for patients with 56 designated rare and intractable diseases/syndromes according to disease severity and patients' income levels. The objective of this study is to examine the impact of the Specified Disease Treatment Research Programme on generic drug utilization under the fee-for-service payment system.

METHODS: We extracted and analysed claims data with indication for Parkinson’s disease, which is subject to the Specified Disease Treatment Research Programme, from the Social Health Insurance claims data processed from February to April 2011. Extracted data were analysed in terms of patients’ age and income levels, types of public subsidy, prescribed places (clinic/hospital or pharmacy) and pharmacologic classes.

RESULTS: During the three months, cumulative total number of 72,145 patients in Social Health Insurance programme were prescribed drugs for Parkinson’s disease, of which 10,013 were entitled to the Specified Disease Treatment Research Programme. Overall average generic utilisation rate is 15.46% on a volume basis. Average generic utilisation rate for those entitled to the Specified Disease Treatment Research Programme is 4.04%, whilst for patients eligible for medical assistance programme is 21.75%. Generic utilisation is fewer in the elderly than in the younger generation.

CONCLUSIONS: On 20% higher utilisation rate on average comparing ALC with placebo or other active medicines was derived from the nationwidewide database of Hungarian National Health Insurance Fund Administration, Pécs, Hungary.

PDN8
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 acylcarnitine component in fatty acid metabolism, is considered a potential agent for peripheral neuropathic pain (PNP).

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 VisualAnalogue Scale (VAS) of PNP patients (MD, 1.28; 95%CI, 0.93-1.64; P < 0.0001). In the subgroup analysis of diabetic PNP patients, ALC on VAS 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 reducing VAS than non-diabetic PNP patients (diabetic subgroup: MD, 1.47; 95% CI, 1.06-1.87; P = 0.00001; 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 common adverse events were pain, headache, paraesthesia, hypopnea, retching, biliary colic and gastrointestinal disorders. The rate of 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.

PDN9
AGE AND GENDER DISTRIBUTION OF OUTPATIENT CARE PHYSIOTHERAPY SERVICES FOR CEREBRAL 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 outpatient-care. The Cerebral Palsy and other paralytic syndromes are listed in the International Classification of Diseases (ICD) with code of G80-G83. The number of cases in physiotherapy activities were determined per 10000 persons by age and gender in outpatient care.

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 48.48% of total activities: individual training (7.79 %), passive motion therapy on multiple 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 (4.15%), 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 of the physiotherapeutic treatments provided in diseases of the nervous system was 4.04% million Hungarian Forint (1.25 million Euro) health care budget. Though the cost of total treatments entitled to the Specified Disease Treatment Research Programme on generic drug utilisation under the fee-for-service payment system. The data come from the financial database of Hungarian National Health Insurance Fund Administration, Pécs, Hungary.

PDN10
ASSISTMENT 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 outpatient care and determine the total health care expenses of them in Hungary in 2009.

METHODS: Data were derived from the nationwide database of Hungarian National Health Insurance Fund Administration (NHIFA), based on official reports of outpatient care institutes. The percentage of different types of treatment codes are listed in the chapter of the Guidelines of NHIFA for Physiotherapists, massage-therapists, conductors and other physiotherapy practices. The diseases of the nervous system are listed in the International classified Diseases (ICD) with code of 000-C99.

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 48.48% of total activities: individual training (7.79 %), passive motion therapy on multiple 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 (4.15%), 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 of the physiotherapeutic treatments provided in diseases of the nervous system was 4.04% million Hungarian Forint (1.25 million Euro) health care budget.

CONCLUSIONS: Though the cost of total treatments entitled to the Specified Disease Treatment Research Programme on generic drug utilisation under the fee-for-service payment system. The data come from the financial database of Hungarian National Health Insurance Fund Administration, Pécs, Hungary.

PDN11
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, antioxidant, anti-inflammatory and anti-gingivitis properties of Sesamol. This study was aimed 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 was done to correlate corticosterone levels.

RESULTS: Mice administrated 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 (locomo- tor activity and memory) and hyperglycaemia associated with CFS. Furthermore, it rectified the diminished levels of antioxidant enzymes such as SOD, GST and GSH in brain and altered levels of proinflammatory 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 therapeutical application of sesamol against CFS and also offers the scope for its development against neuropsychiatric disorders.

URINARY/KIDNEY DISORDERS – Clinical Outcome Studies

P01K
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 between 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 concomitant therapy (such as with an alpha-blocker, hormone therapy) were sought from PubMed, EMBASE, Cochrane Library, and Google Scholar. Abstracts, titles and then the full-text manuscripts of all selected articles will be retrieved and assessed by two reviewers independently. Any disagreement in assessing the eligibility criteria. Disagreements in the study selection and data extraction 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 the RCTs included in the systematic review.

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 in erectile dysfunction, a systematic review/meta-analysis of the evidence reporting its AE profile when used for...