METHODS: We conducted literature reviews to identify economic and clinical values of triptan therapy. The clinical values of triptans were estimated based on randomized controlled trials (RCT), systematic reviews, and meta-analyses. We refer to previously published economic evaluation studies of triptan medications for selection of outcome measures and design of the simulation model. We built a decision tree model to explore cost-effectiveness analysis of a single attack in migraine patients. Outcome measures were 2-hour pain free, sustained freedom from pain, and sustained freedom from pain without side effects, based on previous studies and clinical practice guidelines. Cost of treating migraine was estimated by using Korea’s national health insurance claims database. Societal perspective was taken. One-way probabilistic sensitivity analyses, as well as probabilistic sensitivity analyses, were conducted. RESULTS: Naratriptan, Sumatriptan, and Zolmitriptans are listed in the Korean National Health Insurance Drug List as of 2007. The efficacy of Naratriptan is inferior to Sumatriptan and Zolmitriptan in terms of 2-hour pain free, sustained freedom from pain, and sustained freedom from pain without adverse events. Cost-effectiveness analysis suggests that Naratriptan and Zolmitriptan are dominated by Sumatriptan in terms of the three observed outcome measures. Sensitivity analyses suggest that our results were robust under different assumptions. CONCLUSIONS: Naratriptan and Zolmitriptan are dominated by Sumatriptan in terms of 2-hour pain free, sustained freedom from pain, and sustained freedom from pain without side effects. Our results should be interpreted with caution, since Naratriptan and Zolmitriptan may have other values which could not be measured in our study.

SYSTEMIC DISORDERS/CONDITIONS – Patient-Reported Outcomes Studies

ACCESS TO CARE AND HEALTH OUTCOMES AMONG THE SEVERE HEMOPHILIA A POPULATION IN CHINA TODAY
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OBJECTIVE: The assessment of healthcare in China is at an early stage and efforts to improve care require a better understanding of current treatment standards, clinical outcomes, and patient health-related quality of life (HRQOL) in China relative to other countries. METHODS: Severe hemophilia A patients and their caregivers in China (Beijing and Shanghai), Russia, Argentina, and the United States completed a cross-sectional survey of treatment and health outcomes in 2009. HRQOL was measured using the Peds-QL for children, the SF-12 for adults and the EQ-SD for all patients. Due to recruitment methods, the Chinese patient cohort may not be representative of the average Chinese patient cohort. RESULTS: A total of 160, 167, 57, and 117 patients in China, Russia, Argentina, and the United States completed the survey, respectively. On average, while Russian, Argentine, and American patients reported being diagnosed within the first year after birth, Chinese patients waited 6 years. Only 18% of the Chinese patients are able to receive FVIII to treat bleeds all of the time, while it is 53%, 86%, and 100% for Argentina, Russia and the United States (chi-square P = 0.0001). Chinese hemophilia children scored an average of 38.4 on the physical functioning domain of the Peds-QL; significantly lower than in Argentina (61.5), Russia (68.6) and the United States S (82.9) (all P < 0.0001). Chinese hemophilia adults reported an average of 33.9 on the SF-12 physical component summary which was significantly lower than patients in Argentina (39.3), Russia (37.4) and the United States (39.8) (all P < 0.01). The average EQ-SD health utility score was significantly lower in China (0.49) compared with 0.75, 0.73 and 0.80 in Argentina, Russia and the United States, respectively (all P < 0.0001). CONCLUSIONS: There is substantial room to improve the HRQOL for Chinese hemophilia patients. Improving access to hemophilia care and Factor VIII treatment may improve health outcomes and thus HRQOL.

IMPACT OF CHRONIC IMMUNE THROMBOCYTOPENIC PURPURA AND ITS TREATMENTS ON QUALITY OF LIFE USING THE DELPHI TECHNIQUE
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OBJECTIVE: Impact of chronic immune thrombocytopenic purpura (ITP) and its treatments on quality of life (QoL) was explored. METHODS: As the modified generative round, a questionnaire composed of 29 items was developed through literature review and focus group discussion. Then 2-round web based delphi survey was conducted with 11 panelists who were key hematologists and treating most of the ITP patients in Korea. The panelists were asked to make a choice on main discomforts that generally affect ITP patients’ QoL and rate the health of non-refractory and refractory patients using EQUSD and VAS. Furthermore, they were requested to indicate their level of agreement on possible aspects of QoL, based on 5-point likert scale. RESULTS: The nearly unanimous consensus was made that major factors affecting QoL were consistent bruising, limitation of physical & social activities and psychological disorders at bleeding risk. The utility derived from rated QoL for non-refractory ITP was 0.717 for EQUSD and 56.4 for VAS and that for refractory ITP was 0.422 for EQUSD and 47.7 for VAS. The considerable impairment of QoL was figured out for overall chronic ITP patients compared with general population and the decrement of QoL for refractory patients was found far more serious than non-refractory patients. Mean difference of 0.285 for EQUSD. It was also concluded that economic burden from non-reimbursement drug uses was significant determinants of diminution of QoL in ITP, in addition to increased risk of bleeding and cumulated side effects from tryouts. CONCLUSIONS: ITP and its treatments negatively impact on QoL and most seriously in refractory patients. The treatment that effectively prevents and manages refractory ITP would benefit health-related QoL in chronic ITP patients.

SYSTEMIC DISORDERS/CONDITIONS – Health Care Use & Policy Studies

CHARACTERIZATION OF TREATMENT STRATEGIES FOR NEUROPATHIC PAIN: EVIDENCE FROM A PAIN SPECIALIST SETTING IN THAILAND
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OBJECTIVE: This study is aimed to descriptively analyze the treatment strategies of refractive pain (NeP) in a pain specialist setting. Methods: A medical chart review was conducted with 26 new NeP patients attending the pain clinic in Siriraj hospital, a tertiary care hospital, over a period of 18 months (January 2008-June 2009) was performed. Collected data included patient characteristics, comorbidities, types of NeP, and the use of pharmacological and non-pharmacological treatments. RESULTS: Patients were predominantly female (57.1%) with a mean age of 56 years. Mixed NeP was found to be the most common NeP (60.9%) whereas pure NeP accounted for 39.1%. Over two-thirds of the patients (79.3%) were newly diagnosed at the pain clinic, and a small proportion were diagnosed and referred from other hospital departments (17.3%) and other hospitals (3.4%). Common comorbidities were musculoskeletal disorder (32.7%), malignancy (29.3%) while hypertension and diabetes were less frequently found. Opioids (O) (29.5%) and anti-epileptic drugs (E) (28.8%) represented the majority of drugs used whereas the use of antidepressants (D) and NSAIIDs accounted for 18.4% and 10.6% respectively. Intervention for pain relief was prescribed at 17%. In mixed NeP, O were the most common drug (32.9%) while E were most often prescribed in pure NeP (33.0%). We found the three-drug combination (O + E + D) was the most common (37.8%) treatment strategy. The four-drug combination (O + E + D + NSAIIDs) was the second most common strategy (33.0%). The two-drug combination (O + E) and single drug (E) accounted for 14.8% and 3.4% respectively. Considering the type of NeP, the most prevalent treatment strategy in pure NeP and mixed NeP was the three-drug combination (44%) and the four-drug combination (36%) respectively. CONCLUSIONS: NeP treatment strategies using more than two drugs from different therapeutic areas were commonly used in the pain specialist setting. This is due to pain symptoms in NeP being complex and frequently associated with other comorbidities.

URINARY/KIDNEY DISORDERS – Clinical Outcomes Studies

COMPARING THE RISK OF DEATH BETWEEN PERITONEAL DIALYSIS AND HEMODIALYSIS IN TAIWAN’S ESRD POPULATION
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OBJECTIVE: To compare the risk of death between peritoneal dialysis (PD) and hemodialysis (HD) patients. METHODS: Through the national health-care insurance (NHI) database, we identified a national cohort of 66,080 patients initiating dialysis therapy between January 1, 1998 and December 31, 2006 and followed a maximum of 9 years. To compare the survival functions between PD and HD patients, the Kaplan-Meier life table was applied. Both proportional and non-proportional Cox regression models were conducted to evaluate the relative hazard of death by dialysis modality using the intention-to-treat (ITT) approach. Three propensity score strategies were applied to achieve covariate balance, matching, stratification, and regression adjustment. Subsets analyses were defined by age and diabetes mellitus (DM), and sensitivity analyses were conducted by the logit propensity score. RESULTS: The results showed that the hazard ratios (HRs) of PD and HD patients varied by age and with/without DM. Among patients under age 49 with or without DM, PD was associated with a lower risk of death. Among patients aged 50–59, the HR of PD relative to HD was higher for those with DM but was lower for those without DM. For patients aged over 60 with or without DM, the HRs were higher on PD than on HD. We also found that the HRs for PD and HD were not proportional over time. The risk of death for PD patients was generally lower during the first year or first 2 years
after the onset of dialysis. Thereafter, the risk of death increased on PD patients. Results were consistent in different propensity score models and in sensitivity analyses.

CONCLUSIONS: In conclusion, there was an initial survival advantage of PD compared with HD among younger or non-DM patients. As the increase in age, with the presence of DM, and vintage, this relative survival advantage vanished, and even reversed.

URINARY/KIDNEY DISORDERS – Cost Studies

LONG-TERM HEALTHCARE RESOURCE CONSUMPTION AMONG HEMODIALYSIS PATIENTS AND PERITONEAL DIALYSIS PATIENTS IN TAIWAN

Chang SE1, Lin CY2

METHODS: Using Taiwan’s National Health Insurance Database, we identified all ESRD patients beginning dialysis between January 1, 1998 and December 31, 2004 and tracked their health-care resource consumption (defined as reimbursement medical points) for 3 years. Only patients with 90 days or more of treatment follow-up were included. For patients whose treatments were followed less than 36 months, resource consumption was prorated based on the period observed. Annual resources consumed by patients using different modalities were calculated. Both intention-to-treat (ITT) and as-treated (AT) approaches were employed. In AT analyses, patients were further divided into eight subgroups to understand the extent of modality transfer. We further conducted regression analyses to adjust for patient characteristics. RESULTS: A total of 48,565 patients met the study criteria, with 93.9% initiating HD and 6.1% initiating PD. In ITT analysis, the annual total health-care resource consumption for HD patients was higher than that for PD patients by 119,085 points. Compared to HD patients without switch, annual total health-care resource consumption for PD patients without switch was lower by 143,715 points in AT analysis. Those patients switching from HD to PD in any study year, or from PD to HD in the second or third treatment year, also consumed fewer resources. Higher resource consumption (12,556 points) occurred only in the 6.6% of PD patients with first-year switch to HD.

CONCLUSIONS: Three-year aggregated treatment cost is highest in incident PD patients who switch to HD within the first year of treatment and lowest in PD patients without switch. Nonetheless, compared to patients starting HD without switch, PD demonstrated higher resource savings capacity in the incident dialysis population. Over 93% of patients beginning dialysis with PD demonstrated resource savings compared to less than 2% of those starting HD.

URINARY/KIDNEY DISORDERS – Patient-Reported Outcomes Studies

COMPARISON OF SF-6D, EQ-5D AND VAS IN HEMODIALYSIS THAI PATIENT

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METHODS: Using primary data collected in 2009 for an ongoing study on the cost-effectiveness of Renal Transplants, the EQ-5D questionnaire was self-administered by 317 Thai HD patients on dialysis who are currently on the transplant waiting list. Respondents answered validated Malaysian English, Malay or Chinese versions of the EQ-5D questionnaire comprising 1) rating of the five EQ-5D dimensions of health and 2) visual analogue scale (VAS) of their own health, respondent demographics and percepions. The results from this study were compared against the QOL of Malaysian dialysis patients from a 2004–2005 study by Faridah.

RESULTS: A total of 208 respondents answered the questionnaire. Of these 195 patients receiving hemodialysis at Siriraj hospital. Not only the correlation coefficient was compared across the different measurement tools but the Bland and Altman plot was also used to graphically illustrate the agreement of instruments.

RESULTS: Patient samples had the mean age of 57.28 ± 14.49 years and been hemodialised on the average for 7.70 ± 5.07 years. The mean SF-6D score was 0.749 ± 0.139 showing significantly higher than EQ-5D (0.686 ± 0.322), and VAS (0.634 ± 0.310) scores. The Pearson’s correlation coefficients between utility scores with kidney disease specific questionnaires illustrated that all three utility scores correlated well with the dimension of symptoms and Problems, but were low associated with Burden of Kidney Disease and Effects of Kidney Disease on Daily Life dimensions. Of these three disease specific dimensions, the SF-6D showed higher relationship on two dimensions. The Bland-Altman plots also suggested a pattern of agreement in favor of SF-6D with kidney specific dimensions. CONCLUSIONS: Utility scores from SF-6D, EQ-5D, and VAS illustrated consistent results with highest score on SF-6D. The SF-6D presented better agreement with kidney specific scales than EQ-5D and VAS. These findings implied that SF-6D could, to a certain extent, reflect HRQoL status of hemodialysis patients and might be use as the only QOL instrument for patient care to avoid patients’ burden on answering multiple questionnaires.

EVALUATION OF PSYCHOMETRIC PROPERTIES OF THE JAPANESE VERSION OF THE NOCTURIA QUALITY OF LIFE QUESTIONNAIRE (N-QOL)

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METHODS: Psychometric properties were assessed in 121 Japanese men and women experiencing nocturia at least once a night. The questionnaire used in this study included the Japanese version of the N-QOL as well as several other instruments: the Pittsburgh Sleep Quality Index (PSQI), the Epworth Sleepiness Scale (ESS), the International Prostate Symptom Score (IPSS), the Overactive Bladder questionnaire Short Form (OAB-q SF) and the Medical Outcomes Study Short Form-36 ver. 2 (SF-36v2).

RESULTS: For concurrent validity, the N-QOL overall score correlated moderately with the scores of PSQI, IPSS, OAB-q SF, and Physical Component Summary measure of SF-36v2, respectively, although the correlation was weak with ESS. For discriminant validity, statistically significant differences were found among the scores of those experiencing one, two, or three or more episodes of nocturia. For construct validity, the structure could be considered almost the same as the original; one factor was found to belong to a subscale different from the original analysis. For reliability, the Cronbach’s alpha coefficients ranged from 0.87 to 0.93, providing evidence of internal consistency. CONCLUSIONS: The Japanese version of the N-QOL demonstrated validity and reliability, and appears to be suitable for clinical use.

QUALITY OF LIFE OF MALAYSIAN DIALYSIS PATIENTS ON TRANSPLANT WAITING LIST

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OBJECTIVES: This objective of this research was to describe the quality of life of Malaysian renal failure patients who are on dialysis awaiting a potential transplant at 6 Malaysian Government hospitals. METHODS: This study utilizes primary data collected in 2009 for an ongoing study on the cost-effectiveness of Renal Transplants. The EQ-5D questionnaire was self-administered by Malaysian renal failure patients on dialysis who are currently on the transplant waiting list. Respondents answered validated Malaysian English, Malay or Chinese versions of the EQ-5D questionnaire comprising 1) rating of the five EQ-5D dimensions of health and 2) visual analogue scale (VAS) of their own health, respondent demographics and perceptions. The results from this study were compared against the QOL of Malaysian dialysis patients from a 2004–2005 study by Faridah.

RESULTS: A total of 208 respondents answered the questionnaire. Of these 195 were useful for analysis. Mean age was 41 years in the sample of which 54% were male and 75% had a secondary or tertiary level education. Most patients opted to answer the Malay language questionnaire (83%), compared to the English (6%) and Chinese (11%) language versions. Mean quality of life for the entire sample was a VAS score of 77.7 (SD 14). Very few respondents reported extreme problems in any health dimension. The highest rate of extreme problems was 2% for usual activity. Quality of life was found to be related to age and how the respondent felt on the day. The relationships were statistically significant. CONCLUSIONS: The EQ-5D appears to be able to measure the QOL of Malaysian dialysis patients. QOL of dialysis patients from this survey are similar the results from a previous study conducted in 2004–2005.