PCV33

COST OF OUTPATIENT HYPERTENSION PHARMACOTHERAPY - COMPARATIVE STUDY BETWEEN BULGARIA AND SERBIA
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OBJECTIVES: Pharmacotherapy costs represents huge burden for health institutions. The aim of the study is to compare prescribing practice and cost of outpatient hypertension pharmacotherapy between Bulgaria and Serbia. METHODS: A one year retrospective study from the point of view of the health system was performed, based on the collected reimbursed prescriptions with diagnosis AH (I10-I11) and for its complications—heart failure (I50); sequelae of cerebrovascular disease (I69); angina pectoris (I20). Therapy was analysed according to the complexity (mono-, di-, etc.), frequency of prescribed medicines, reimbursed drug prices, and patient co-payment. To calculate the cost of the outpatient therapy was build a decision tree model matching the frequency of particular brand name prescribing, their prices, and complexity of therapy. RESULTS: The relative share of uncomplicated hypertension is comparable (67% in Serbia and 65% in Bulgaria). The ACE inhibitors are the first choice for hypertension treatment in both countries. Hypertension monotherapy differs significantly (47% in Bulgaria and 6% in Serbia), while di-therapy is comparable (35% and 30%). Among the complications prevail prescriptions for angine pectoris (70% in Serbia and 42% in Bulgaria) and heart failure (7% and 26%). The complications are usually treated with more than one medicine in Serbia while the monotherapy in Bulgaria is 66%. By including the cost and prevalence of mono-, di- etc therapy in the “decision tree” model we receive that the waged monthly cost of outpatient pharmacotherapy per patient with uncomplicated hypertension account for €12.56 in Serbia and €6.90 in Bulgaria. The total monthly cost of hypertension considering the chance of having complications is €13.39 in Serbia and €8.23 in Bulgaria. Patient co-payment in Bulgaria is higher. CONCLUSIONS: International cost comparisons are possible but depend on many external factors as regulatory and price control measures, prescribing habits, reimbursement policy.

PCV34

COST-EFFECTIVENESS OF GADOFOSVESET-ENHANCED MAGNETIC RESONANCE (MR) ANGIOGRAPHY FOR THE PATIENTS WITH CHRONIC PERIPHERAL ARTERIAL OBSTRUCTIVE DISEASE (PAOD) IN KOREA
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OBJECTIVES: To assess the cost-effectiveness of gadofosveset-enhanced MR Angiography (VV-MRA) compared with conventional extracelullar contrast agents enhanced MRA (EC-MRA), and computed-tomography angiography (CTA) for the diagnosis and treatment of chronic PAOD patients in Korea. METHODS: It is assumed that diagnostic test affects the treatment decision and the patient’s health outcome consequently. Decision analytic model based on the published clinical guidelines for the PAOD diagnosis and treatment was constructed. We adopted societal perspective and 1 year time horizon. The sensitivity and specificity of imaging diagnostic tests were extracted from published studies to estimate probabilities of diagnostic positive and positive predictability. The studies that used the conventional angiography or digital subtraction angiography as a gold standard were included. Costs broke down into imaging costs and treatment costs. They were collected from experts’ panel survey and National Health Insurance Claims database. All costs were expressed in 2007. Quality weights for health outcomes were extracted from published studies. Incremental cost-effectiveness ratio was calculated and sensitivity analysis for various uncertain parameters was conducted. RESULTS: For the base case analysis, incremental cost per QALY of VV-MRA was 24,591,939 KRW/QALY (US426,078/QALY) compared with CTA, and EC-MRA was dominated. The results of sensitivity analysis showed that the costs of imaging and treatments, and the probabilities of the treatment options didn’t change the results. The result could be influenced by prevalence rate. CONCLUSIONS: VV-MRA technique was the cost-effective option compared with EC-MRA and CTA for diagnosis for patients with chronic peripheral arterial obstructive disease.

PCV35

COST-EFFECTIVENESS ANALYSIS OF STROKE REHABILITATION STRATEGIES IN EASTERN CHINA
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OBJECTIVES: Stroke is the second leading cause of death in China, and its incidence is expected to increase over the years despite primary prevention efforts. The aim of this study was to compare the costs and health effects of stroke rehabilitation strategies in eastern China. METHODS: A literature review of the possible stroke rehabilitation strategies was conducted to compare their impact on costs and health effects. Treatment effects were based on changes measured using functionality scales such as the Modified Barthel Index (MBI). These changes were transformed into general health-related quality of life (QOL) improvement according to a generic QOL instrument (EQ-5D). Costs included direct medical and non-medical costs but did not include indirect costs. RESULTS: Three different strategies could be identified. The first strategy is one month of hospitalization including rehabilitation, which is what most stroke patients receive. The second is one month of hospitalization with rehabilitation for six months. The third strategy is hospitalization for six months and no active rehabilitation. Rehabilitation for six months achieves the greatest health improvement (MBI = 65) but at the greatest cost (RMB34,000), while one month of hospital including rehabilitation is the least effective (MBI = 35) and cheapest strategy (RMB19,000 RMB). Extended hospitalization without rehabilitation results in intermediate costs and effects (MBI = 45 at a cost of RMB29,500). CONCLUSIONS: Full rehabilitation for six months appears to be the most cost effective option for stroke patients in China. Unfortunately, this strategy is out of reach for most Chinese patients, and this is due to many factors including lack of facilities and skilled personnel. Efforts need to be taken to find effective and cost-effective strategies that can be provided to the majority of Chinese stroke patients.

PCV36

COST-EFFECTIVENESS AND COST UTILITY ANALYSIS OF TRITACE COMB (RAMIPRIL/HCTZ) IN TREATMENT OF HYPERTENSION IN POLAND
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OBJECTIVES: To determine the cost-effectiveness and cost-utility of Tritace Comb (ramipril+ hydrochlorothiazide) compared to standard therapy of ramipril and hydrochlorothiazide (HCTZ) used in monotherapy and compared to compound
therapy of captopril/HCTZ in the treatment of hypertension in Poland. METHODS: To gain data on clinical effectiveness of analyzed therapies the clinical effectiveness analysis based on systematic review of RCTs was conducted. Direct medical costs regarding drug costs and ambulatory treatment, second-line therapy, complications and adverse events valid from public payer perspective were taken into account in the model. Costs data were gained from National Health Fund in Poland and medical experts from cardiology and hypertension. Modelling method applied was a Markov model with a 32 year time horizon. Sensitivity analyses was performed. The analysis were done according to HTA guidelines in Poland. RESULTS: Statistically significant difference in hypertension reduction between ramipril/HCTZ and monotherapy with ramipril or HCTZ was revealed in favour of ramipril/HCTZ. No significant differences in safety profile were found. No significant differences in hypertension reduction were observed in comparison to combined therapy captopril/HCTZ but hypertension control was significantly longer for ramipril/HCTZ treatment. The analysis showed that incremental costs per LYGs were estimated at 1,515 PLN, 1,925 PLN, 10,733 PLN for ramipril/HCTZ compared to ramipril, HCTZ or combined therapy captopril/HCTZ, respectively. Incremental costs per QALYs were estimated at 1,925 PLN, 8,800 PLN, 13,930 PLN when comparing ramipril/HCTZ with standard therapy of ramipril, HCTZ and captopril/HCTZ respectively. Sensitivity analysis showed that the results of the analysis are robust. CONCLUSIONS: Treatment of hypertension with Tritace comb (ramipril/HCTZ) compared with a standard mono therapy of captopril/HCTZ but hypertension control was significantly longer for ramipril/HCTZ treatment. The analysis showed that incremental costs per LYGs were estimated at 1,515 PLN, 1,925 PLN, 10,733 PLN for ramipril/HCTZ compared to ramipril, HCTZ or combined therapy captopril/HCTZ, respectively. Incremental costs per QALYs are below the acceptable threshold for very cost-effectiveness treatment in Poland (27,000 PLN).

PCV37
ENOXAPARIN IS COST-SAVING AS PROPHYLACTIC THERAPY VERSUS UNFRACtionATED heparin OR NO PROPHYLAXIS IN HOSPITALISED MEDICAL PATIENTS
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OBJECTIVES: To evaluate the cost-effectiveness of enoxaparin compared with unfractionated heparin (UFH) or no prophylaxis for prevention of venous thromboembolism (VTE) in hospitalised medical patients from the Australian hospital perspective. METHODS: A hypothetical cohort of hospitalised medical patients was assumed to receive prophylaxis of one of the following: enoxaparin 40 mg once-daily (tid); UFH 5000 IU thrice-daily (tid); UFH 5000 IU bi-daily (bid); no prophylaxis. A decision-analytic model was constructed using clinical trial data and local treatment algorithms. Analysis was conducted for all medical inpatients and a subgroup of patients with ischaemic stroke. The analysis estimated the incidence of VTE (symptomatic DVT and PE), adverse events (heparin-induced thrombocytopenia [HIT], prophylaxis and treatment-related major bleeding), mortality and costs of prophylaxis and treatment within 30 days and one year of initiating prophylaxis. RESULTS: In a cohort of 10,000 patients, at 30 days the estimated number of VTE events was 107 (enoxaparin or UFH tid), 189 (UFH bid) and 292 (no prophylaxis). Estimated numbers of adverse events were 54 (enoxaparin), 198 (UFH tid), 199 (UFH bid) and 49 (no prophylaxis). Estimated total numbers of deaths attributable to prophylaxis, VTE treatment and adverse events were 27 (enoxaparin), 40 (UFH tid), 57 (UFH bid) and 63 (no prophylaxis). Total costs of prophylaxis, diagnostic testing, VTE treatment and adverse event treatment were AUS$1.1 million (enoxaparin), AUS$1.7 million (UFH tid), AUS$1.9 million (UFH bid) and AUS$1.4 million (no prophylaxis). An additional 12 (enoxaparin or UFH tid), 21 (UFH bid) or 32 (no prophylaxis) VTE events were incurred at one year. In patients with ischaemic stroke there was an enhanced effect of enoxaparin versus other therapies, with greater cost savings and incremental outcomes. CONCLUSIONS: Thromboprophylaxis with enoxaparin prevents VTE events and related deaths in medical patients, and simulated cohort analysis demonstrates its cost-saving potential when used instead of UFH.

PCV38
EXTENDED PROPHYLAXIS OF VENOUS THROMBOEMBOLISM (VTE) IN PATIENTS UNDERGOING MAJOR ORTHOPAEDIC SURGERY IN ITALY: A PHARMACOECONOMIC STUDY
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OBJECTIVES: Venous thromboembolism (VTE) is a relevant cause of morbidity and mortality in patients undergoing major orthopaedic surgery (MOS). Thromboprophylaxis is recommended in this setting and low-molecular-weight-heparins (LMWHs) are the anticoagulant agents most frequently used. Fondaparinux is an effective and safe alternative in this setting. Objective of our study was to investigate the cost-effectiveness of fondaparinux versus enoxaparin from the perspective of the Italian National Health Service (NHS) in patients undergoing MOS. METHODS: A decision tree model was developed in order to compare fondaparinux with enoxaparin in extended thromboprophylaxis of patients undergoing MOS. Probabilities of symptomatic events were derived from the results of randomized controlled trials; use of resources in common clinical practice in Italy was evaluated by means of an “ad hoc” questionnaire administered to a panel of experts. Only direct cost of VTE (acute treatment of events and of complications) were included in the analysis. Cost units were derived from current cost of drugs and from Italian National Healthcare tariffs for tests and medical visits in 2007 (in Euros). Incremental Cost-Effectiveness ratios were analysed at three time points: 30 days, one year, five years. RESULTS: After 30 days of extended prophylaxis fondaparinux was associated with a lower cost compared with enoxaparin, leading a saving of €48.83 per patient. At the end of the first year after MOS, the saving is increased to €72.13: rates of late PE and late DVT which are higher with enoxaparin, particularly for patient undergoing total hip replacement (which is the 34% of the population of the model), accounted for this difference. Overall, after 5 years the saving with fondaparinux is €74.36 per patient. Direct cost of prophylaxis is higher with fondaparinux, but this is highly compensated by the different rates of early DVT, early PE and prophylaxis-related major bleeding. One-way sensitivity analysis showed that results were robust to the variation in unit costs for VTE related care or in event rates for both treatments. CONCLUSIONS: The different rates of early and late DVT, PE and prophylaxis-related major bleeding overbalanced the lower cost of enoxaparin, in favour of fondaparinux. Our model suggests that fondaparinux is cost-saving when compared to enoxaparin for VTE prophylaxis in patients undergoing MOS in Italy.