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THE IMPACT OF LOW MOLECULAR WEIGHT HEPARIN (LMWH) ENOXAPARIN USAGE ON OUTCOMES OF TREATMENT MANAGEMENT OF PATIENTS WITH ACUTE CORONARY SYNDROMES (ACS) IN RUSSIA

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OBJECTIVES: Creation of Russian Registry of patients in ACS. Pharmacoeconomic assessment of costs and consequences of non-ST segment evaluation ACS (NSTE ACS) by traditional anticoagulants and LMWH enoxaparin usage. METHODS: Registry 1 was produced in July 2001 by inclusion of 50 adult hospital patients in ACS from 59 clinics of Russian cities. A total of 1394 patients were with NSTE ACS; 64% of them received unfractionated heparin (UFH) and 7.4%—LMWH. Registry 2 was done in 2003 according the same criteria. A total of 1185 patients from 32 clinics were enrolled. 659 of them were with NSTE ACS, 19% were treated by UFH, 60%—by enoxaparin. Pharmacoeconomic analysis “cost—effectiveness” was succeeded as: k = C2 – C1 / E2 – E1. N2 and N1—average value of Cost per hospital patient in Registry 2 and 1 accordingly (including costs of treatment and resource utilization). Å2 and Å1—probability of successful outcomes of the disease in Registry 2 and 1 as well, k—cost per 1% of growth of effectiveness of the treatment. RESULTS: There weren’t statistical discrepancy between clinical characteristics and duration of hospitalization of patients into the Registry 1 and 2. A share of more effective treated patients has been increased in Registry 2 versus Registry 1. Probability of mortality decreased by 2.3%, riskfactor—by 6.8%. refractory angina—by 6.3% (p < 0.001). Probability of successful outcomes (E2 – E1) increased by 14.9%. N2 and N1 = USD 160.68; C1 = USD 100.64; E2 = 75.9%; E1 = 61%; k = USD 4.03/ %. CONCLUSION:Probably the rise of number of successful outcomes of NSTE ACS in Registry 2 was affected by more active of LMWH enoxaparin usage. Every percentage of reduction of serious adverse effects costs extra USD 4.03 but it leads to increase in the quality of health care and decrease in expenditures on ill effects after discharge from the hospital.
SCREENING FOR ABDOMINAL AORTIC ANEURYSM IN MEN. AN ECONOMIC EVALUATION BASED ON A SYSTEMATIC REVIEW OF THE LITERATURE

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OBJECTIVES: Abdominal aortic aneurysm (AAA) is a common disease, particularly among elderly men. Rupture of AAA is associated with high mortality, causing about 1% of all fatalities in men over 60 years of age. Most patients with ruptured AAA die before they come to surgery and the overall mortality is about 80%, compared to a reported mortality during elective surgery of 0–9%. Early detection by screening has therefore been advocated and the objective of this study was to evaluate the long-term cost-effectiveness of different screening strategies for AAA.

METHODS: A Markov cohort simulation model was developed and different screening strategies in terms of age and risk profiles of the screened population and re-screening were analysed. Assumptions and variables in the model were based on a systematic review of the literature. The cost per life year gained was used as main outcome measure. RESULTS: The cost per life year gained for the different screening strategies ranged from $8309 to $14,084 and was estimated to $10,474 when 65-year-old men had AAA implanted between 1993 and 1997 were identified. The analysis of sensitivity analyses showed that the results were robust. Variations of risk of rupture among screened and non-screened and long-term survival affected the cost-effectiveness substantially. The cost-effectiveness was rather insensitive to variations in cost of screening, cost of surgery and attendance rate. CONCLUSIONS: Screening for AAA may be cost-effective in 65-year-old men, while screening younger men with a re-screening could be equally cost-effective with the advantage of screening for AAA, age-specific natural course of AAA and age-specific management programs (DMP) in the treatment of CHF, we previously demonstrated a statistically significant reduction in mortality and rehospitalization, but cost-effectiveness of DMPs remains uncertain. Therefore, we sought to evaluate life expectancy and life long medical costs for DMPs.

METHODS: Design: Cost and cost-effectiveness analysis using a 6 state Markov Model representing the number of prior hospitalizations (h = 1 to h = 4+) and death. Data sources: Pooled efficacy data from our meta-analyses of RCTs, SOLVD registry data for age-dependent hospitalizations and mortality rates adjusted for additional benefit from beta-blocker therapy and reimbursement costs in the Australian health care system. Target population: Patients that have been admitted with CHF. Time horizon: lifetime. Perspective: societal. Intervention: conventional therapy and DMP. Outcome measures: Life years gained (LYG) and life-long direct medical costs. RESULTS: For a population aged 73 at onset of CHF (27% female, 33% on beta-blocker), our model yielded, on average, a remaining life expectancy of 3.24 years for conventional therapy and 3.38 years for DMP. Mean undiscounted lifetime costs per patient were estimated at 11,600 € and 12,700 € respectively. The discounted incremental cost-effectiveness ratio (ICER) of DMP vs. conventional care was 8813 € per LYG. Assuming the benefit due to DMP lasting for 5 years after the end of the actual intervention would lead to additional 5 life-months and reduce ICER to 4021 €/LYG. CONCLUSIONS: Based on our decision analysis, DMPs prolong life, but increase life-time costs. A cost-saving effect of DMPs as suggested in some original studies could not be confirmed. However, even under conservative assumptions regarding the duration of DMP, these programs are cost-effective when compared to other well-accepted medical interventions in heart disease.

ARIAL FIBRILLATION HISTORY AND ATRIOVENTRICULAR BLOCK APPEARANCE IN PATIENTS WITH SINUS NODE DISEASE AND SINGLE CHAMBER ATRIAL PACEMAKER—IMPACT ON COST OF THERAPY

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OBJECTIVES: Sinus Node Disease (SND) is a common indication for implantation of a permanent pacemaker. In case of subsequent development of atrioventricular block (AVB) it is necessary to upgrade atrial pacemaker (AAI) to dual-chamber (DDD). The aim of the study was to evaluate the influence of atrial fibrillation (AF) history on the risk of AVB development in patients with SND and permanent AAI and its impact on pacing therapy costs.

METHODS: Data of 752 patients with SND who had AAI implanted between 1993 and 1997 were identified. The history of AF was established on the basis of preoperative exam. The records of patients were examined to find cases that required further procedure to upgrade AAI to DDD. The cost analysis was performed to assess the strategy of primary DDD implantation in those patients with SND that would receive AAI as a standard. The costs taken into consideration were: pacemaker, leads, implantation procedure, hospitalization. The analysis of sensitivity for main partial costs was performed, future costs were discounted. RESULTS: In the whole group of 752 pts – 144 pts (19.1%) required the upgrade procedure. A total of 417 pts (55.5%) had a history of AF. A total of 105 pts had the subsequent DDD pacemaker implanted in the AF group (25.2%) and 39 in the group with no AF history (11.6%). There were savings of 826 € per patient, in the primary AAI implantation arm, in the whole group and 190 € Euro in the no-AF group whereas both strategies were equal in the group with AF history.