COST-EFFECTIVENESS ANALYSIS OF ANTITHROMBOTIC TREATMENT WITH CLOPIDOGREL IN PATIENTS WITH MYOCARDIAL INFARCTION, STROKE, AND PERIPHERAL ARTERIAL DISEASE IN THE NETHERLANDS
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OBJECTIVES: The CAPRIE study has demonstrated an 8.7% relative risk reduction (RRR) for atherothrombotic events (vascular death, myocardial infarction, ischemic stroke) compared with aspirin (ASA) in patients with symptomatic atherothrombotic disease. The objective of this study was to assess the cost-effectiveness of clopidogrel relative to ASA for secondary prevention of ischemic events in the Netherlands. METHODS: The cost-effectiveness, in terms of costs per life-year saved, was determined with a Markov model in which patients were divided according to vascular events and time from last event. Effectiveness data were derived from the CAPRIE study; long-term outcomes were based on epidemiological estimates concerning age specific event rates and case fatality rates. Direct costs were updated from previous studies; indirect costs were disregarded due to the age of the patients. Discount rate was 4% for both costs and effects. RESULTS: Compared with aspirin, using event-specific risk reductions, 1-year treatment with clopidogrel costs €743 more with a gain in life-year and quality adjusted life-years (QALY's) of 0.033 and 0.043 respectively. Using a constant RRR of 8.7%, the results were consistent providing a cost per life-year saved of €19,462 and a cost per QALY of €15,779. Sensitivity analyses revealed that uncertainties surrounding the outcomes are mainly driven by the expected effectiveness, most notably when defining sub-groups. The higher the risk for events, the better the cost-effectiveness ratio. In comparison to no treatment (ASA intolerance or previous failure) clopidogrel is expected to combine gain in effectiveness (0.158 no treatment (ASA intolerance or previous failure) clopidogrel relative to ASA for secondary prevention of ischemic events in the Netherlands.

ECONOMIC EVALUATION AND SURVIVAL ANALYSIS OF IMMUNO-ADSORPTION IN PATIENTS WITH DILATED CARDIOMYOPATHY
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OBJECTIVES: Idiopathic dilated cardiomyopathy (DCM) is a life threatening heart disease and major reason for heart transplantation. Short time medical efficacy of immunoadsorption (IA) for DCM-patients has been demonstrated in first clinical studies. Objective of this study was to determine 5-year survival rates and direct medical costs to calculate costs per life year gained from a societal perspective. METHODS: Based on a previously published matched case-control study with clinical endpoints 34 patients of similar age, sex, duration and severity of DCM were included. Inpatient hospital costs of initial hospital stay were calculated from data extracted from patients' files and hospital's internal costing. Patients and treating cardiologists were contacted, thus determining resource use for primary and specialist’s outpatient care, inpatients hospital stays and drugs during follow up. RESULTS: Patients treated with IA show a highly significant better survival: 5-year survival rate was 82% compared to 41%, Logrank statistics after Kaplan-Meier analysis p = 0.0071. Cost for IA were €28,400 per patient. Five-year medical costs were €118,600 per patient of IA group and €75,500 in controls; the costs per year of survival were €24,900 in IA group respectively €28,900 in controls. Incremental cost-effectiveness was €34,365 per life year gained. CONCLUSIONS: For the first time in a matched controlled study design survival analysis and economic evaluation of this new emerging technology for patients with DCM were performed. Although high initial treatment costs for IA occur the significantly better survival leads to reasonable costs per LYG.

USE OF RESOURCES AND COST IMPLICATIONS OF STROKE PROPHYLAXIS WITH WARFARIN FOR PATIENTS WITH NON-VALVULAR ATRIAL FIBRILLATION
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OBJECTIVE: To investigate the use of resources and cost implications of stroke prophylaxis with warfarin for patients with non-valvular atrial fibrillation (NVAF) in clinical practice. METHODS: All new patients with NVAF referred to anticoagulation clinic over a recruitment period of 21 months were studied. Patients were interviewed personally on their first visit then by telephone call every 4–6 weeks for a mean (SD) of 19 (8.1) months, range (10 to 31 months). They were asked about any bleeding events or bleeding related extra doctor’s visits, procedures or hospital admissions. We also inquired about the method and the cost of transport to the anticoagulation clinic, time off work for the patient and/or his carer and the costs involved. Costs of warfarin treatment were viewed as: a) cost of the drug; b) cost of INR monitoring (analysis, travelling, nurse visits, time off work, and postage); and c) and the costs associated with bleeding (bleeding related extra-doctors visits or hospital admissions). RESULTS: A total of 402 patients were included. Mean (SD) age was 72.3 (10.3) years and 224
(56%) patients were men. Annual event rates were 1.7%, (95% CI 0.4–3.0) for major bleeding, 16.6%, (95% CI 13.0–20.2) for minor bleeding. Mean cost of warfarin treatment per patient per month was £110.0 (95% CI 10.2–11.6) in patients with no bleeding and £11.9 (95% CI 10.3–12.5) in patients with minor bleeding (p = 0.095), while in patients with major bleeding the cost was significantly higher (£299.0, 95% CI 74.6–538.9, p = 0.0001). Total cost of warfarin treatment per patient per year was £159.4 and cost to prevent one stroke per year was £5260.2. CONCLUSIONS: Warfarin treatment was cost-effective relative to the costs of stroke. This is likely to be more cost effective in older people because they have a higher incidence of stroke.

**COST-EFFECTIVENESS ANALYSIS OF ROSUVASTATIN IN GREEK PATIENTS WITH HYPERLIPIDAEMIA**

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**OBJECTIVES:** Rosuvastatin, a new HMG-CoA reductase inhibitor, has been shown to significantly reduce LDL cholesterol. The objective to this analysis was to assess the cost-effectiveness of rosuvastatin compared to all statins currently available in Greece. **METHODS:** A cost-effectiveness model was developed to compare rosuvastatin with atorvastatin, pravastatin, simvastatin and fluvasstatin over 52-weeks, from the perspective of the Greek health care system. Effectiveness was defined as the percentage of patients reaching European targets and was derived from a simulation of clinical trials data. Clinical practice patterns were derived from a survey among lipid treatment hospital centers. Patients received a 12-week prescription of the licensed starting dose. If LDL-C exceeded the target (3.0 mmol/L), patients are titrated to a higher dose of statin every 12 weeks until they achieve target or the maximum dose is reached. Patients reaching target (responders), remain at the last prescribed dose, followed-up every six months. Only direct medical costs were included. However, Greek patients can freely use public or private providers, so both public and private charges were used. Drug cost estimates are based on rosuvastatin expected, and on other statins’ current, ex-factory prices. Budgetary impact estimates were based on a hypothesized rosuvastatin market share. **RESULTS:** More rosuvastatin-treated patients reach target with the starting dose. Rosuvastatin patients need fewer up-titration visits and incur lower costs per responder in their first year of treatment compared to atorvastatin, pravastatin, simvastatin and fluvasstatin. Rosuvastatin is more effective and less costly across the available dose ranges. For a cohort of 10,000 patients, if rosuvastatin where to have a 25% market share, the model calculates that there would be 642 additional responders, reducing annual costs by €728.204,72 and €83,372,08 in private and public charges respectively. **CONCLUSIONS:** Rosuvastatin has been demonstrated to be more effective and a potentially cost-saving therapy for Greek patients.

**ECONOMIC EVALUATION OF CLOPIDOGREL IN SECONDARY PREVENTION OF ATEROTHROMBOTIC EVENTS IN HUNGARY**

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**OBJECTIVE:** To determine the incremental cost-effectiveness ratio (ICER) of a new antiplatelet agent, clopidogrel versus no treatment, in secondary prevention of atherothrombotic events (myocardial infarction, ischemic stroke, vascular death) in patients for whom ASA is not a relevant therapeutic strategy in Hungary. **METHODS:** A Markov model designed with 7 clinical states was used to project the ICER as the cost needed to achieve an extra life year with clopidogrel compared to no treatment with a time horizon of 2 years. Based on Fisher’s analysis the model has combined the rates of clinical outcomes reported in CAPRIE (clopidogrel arm) and in the Antiplatelet Trialists’ Collaboration (no treatment arm) with survival data derived from the Framingham database. Costs of atherothrombotic outcomes were assessed from Hungarian sources. Payer perspective (Insurer) was used. The ICER was calculated for patients who could not take ASA (because of intolerance, allergic or non responders to ASA). A discount rate of 5% was applied to both costs and benefits. **RESULTS:** When compared to no treatment 58 events are avoided per 1000 patients treated with clopidogrel which translates into 297 life years gained. The incremental cost is 241,998 HUF (€968). The ICER of clopidogrel versus no treatment is 814 610 HUF (€3256) per life year saved. Sensitivity analyses shows that results are more sensitive to discount rate and survival data and less sensitive to costs of atherothrombotic events. **CONCLUSION:** Clopidogrel is shown to be extremely cost-effective strategy in Hungary when ASA is not a relevant alternative.

**COSTS OF HOSPITALIZATION IN DEPARTMENT OF CARDIOLOGY FOR PATIENTS WITH SYSTOLIC HEART FAILURE IN FRANCE**

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