OBJECTIVES: To assess the cost-effectiveness, from the UK NHS perspective, of magnetic resonance angiography (MRA), duplex ultrasound (DUS) and computed tomography (CT) compared with contrast angiography (CA) in assessing the extent and location of stenosis and subsequently formulating a treatment plan for patients with peripheral arterial disease (PAD).

METHODS: A probabilistic decision tree was developed in order to estimate the cost per QALY (in £2004) associated with each diagnostic method for assessment of the whole leg, and the arteries above and below the knee. Input parameters were obtained from a systematic review, other published sources and expert opinion. Lack of data to extrapolate the results to a longer period led to consideration of a 1-year time horizon, therefore discounting was not performed. RESULTS: DUS was the dominant strategy for the assessment of the whole leg, with a cost per QALY of £13,646. MRA appeared to be a more cost-effective strategy for the assessment of the arteries above the knee, with a cost per QALY of £8628 with 2D-TOF MRA and an incremental cost per additional QALY compared to 2D-TOF MRA was £37,024 when 2D-TOF MRA was compared to DUS. For below the knee comparisons results were uncertain, with DUS being more likely to be cost-effective at commonly accepted cost-per-QALY threshold values. CONCLUSIONS: The cost-effectiveness of the diagnostic tests was dependent on the area of the leg being assessed, with DUS being dominant for comparisons of the whole leg and cost-effective for below the knee assessments.

ECONOMIC EVALUATION OF DRUG ELUTING STENTS: COST-UTILITY ANALYSIS

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OBJECTIVES: Drug eluting stents (DES) are more effective than bare metal stents (BMS) in preventing angiographic and clinical restenosis. Within this study the cost-effectiveness of sirolimus (SES) and paclitaxel eluting stents (PES) compared to BMS was estimated for a UK setting with data from a meta-analysis. METHODS: A probabilistic Markov model was constructed. The model includes events observed in clinical trials (MI, revascularisation, CABG) and the health states heart failure and stroke. The meta-analysis data comprised 3-year follow-up data of the clinical parameters studied (FEV 1, BMI) showed no significance. The logistic model, corrected for age-sex and severity of disease. The presence of CVEs associated with COPD is high, causing an important co-morbidity, though without increasing the global costs of the disease. Diabetes mellitus and dyslipidemia are the main CVRFs associated; their prevention could improve the disease outcomes. Further studies are needed to confirm the consistency of these results.

ESTIMATION OF THE PRESENCE OF CARDIOVASCULAR EVENTS AND DIRECT COSTS ASSOCIATED WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN AN AMBULATORY SETTING

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OBJECTIVE: To determine the presence of cardiovascular events (CVEs) and their association with the main cardiovascular risk factors (CVRFs) and resource utilization parameters (direct costs) in subjects with chronic obstructive pulmonary disease (COPD) in different Spanish primary care centers. METHODS: A retrospective-multicenter design was adopted, with inclusion of the patients seen for COPD (ICPC: R95) by four primary care teams and two hospitals during 2004. The main measures were: age-sex, cardiovascular antecedents (ischemic heart disease [IHD], cerebrovascular accident, hypertension, dyslipidemia, diabetes mellitus, smoking, obesity) and other co-morbidities, clinical parameters (FEV1, BMI), resources utilization (complementary tests, pharmaceutical prescription, specialist referral, physician visits, hospitalizations and emergency-room visits, ambulatory care) and costs (semixed and direct). A logistic regression analysis was made to fit the model. The costs were contrasted by covariance analysis (ANCOVA-marginal means). Data were analyzed using SPSS-v12 and p values of <0.05 were taken as the level of statistical significance. RESULTS: Nine-hundred patients were seen for COPD; mean age 70.4 ± 9.8 years and 83.3% were males. Around 19.0% (n = 171) had undergone a CVE (CI: 16.4–21.6%); 15.1% with IHD. The main CVEs were: 44.1%-hypertension, 36.2%-obesity, 31.9%-dyslipidemia, 23.6%-diabetes and 22.7%-smoking. The mean morbidity/ patient/year was 10.1 ± 4.2 with CVEs vs. 8.3 ± 4.3 (p = 0.000); the clinical parameters studied (FEV1, BMI) showed no significance. The logistic model, corrected for age-sex and severity identified as associated factors: diabetes mellitus (OR = 2.1; CI = 1.3–3.4; p = 0.001) and dyslipidemia (OR = 1.7; CI = 1.1–2.7; p = 0.002). Quantification of unit cost/year/COPD was €7793.22 ± 3166.30 (70.5% pharmaceutical expenditure). The cost/year/patient-adjusted was €2847.22 (SE = 117.02) without CVEs, versus €2563.66 (SE = 244.05) with CVEs, p = NS. CONCLUSIONS: The presence of CVEs associated with COPD is high, causing an important co-morbidity, though without increasing the global costs of the disease. Diabetes mellitus and dyslipidemia are the main CVRFs associated; their prevention could improve the disease outcomes. Further studies are needed to confirm the consistency of these results.

ESTIMATION OF THE PRESENCE OF CARDIOVASCULAR EVENTS AND DIRECT COSTS ASSOCIATED WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE IN AN AMBULATORY SETTING

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OBJECTIVES: In The Netherlands, costs of statin use have recently increased sharply compared to costs of other drugs. Yet, several studies have established undertreatment and overtreat-