utilization patterns of hypertension therapies among patients initiating angiotension ii receptor antagonist therapy

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OBJECTIVE: Angiotension II receptor antagonists (ARB) provide a new therapeutic option for hypertensive patients. This analysis examines patient utilization patterns subsequent to initiation on an ARBs. METHODS: This study uses a retrospective cohort design with a six-month baseline period and a twelve-month evaluation period. New users of ARBs were identified in AdvancePCS’ pharmacy claims database. Studied patients were continuously eligible for pharmacy benefits, 20 to 80 years of age, and initiated therapy on losartan, valsartan, ibersartan, candesartan, telmisartan, losartan HCT, valsartan HCT, candesartan HCT, or telmisartan HCT between November 1, 2001 and April 30, 2002. RESULTS: A total of 167,083 patients initiated ARB therapy during the enrollment window, 72% on ARB monotherapy and 28% on combination therapy. Monotherapy patients (p < 0.05) were more likely to discontinue than combination therapy patients. No other significant differences in discontinuation rates were identified. Patients who initiated with monotherapy were equally likely to add a diuretic as a second therapy regardless of ARB. Patients who initiated on telmisartan were less likely (p < 0.05) than patients who initiated on losartan (OR = 0.67), valsartan (OR = 0.81), ibersartan (OR = 0.82), or candesartan (OR = 0.82) to receive triple anti-hypertensive therapy. Similarly, patients who initiated on valsartan (OR = 1.23) or losartan monotherapy (OR = 1.14) were more likely than other monotherapy patients (p < 0.05) to titrate upwards. Combination patients who initiated on losartan HCT or valsartan HCT were more likely to add another anti-hypertensive drug than were patients who initiated on either candesartan HCT (OR = 0.69, p < 0.05) or telmisartan HCT (OR = 0.82, p < 0.05). Those who initiated telmisartan HCT were least likely to increase the initial dose (p < 0.05). CONCLUSIONS: Differences in patient utilization patterns were identified based on initial choice of ARB. These findings may result from differential clinical efficacy, patient health history, or managed care influence on drug choice.

RECENT EVIDENCE SURROUNDING THE EFFICACY OF PROTECTED CAROTID ANGIOPLASTY WITH STENTS

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OBJECTIVES: Carotid artery stenosis is an important risk factor for, and is also believed to cause as much as 20% all strokes. Several surgical therapies are available including carotid endarterectomy (CEA) and carotid angioplasty with stenting (CAS). Although there appear to be benefits to adopting widespread use of CAS, numerous parties have expressed concern about its safety. A number of large protected CAS (PCAS) trials are underway, however, it will be 3 to 5 years until these results are released. In the interim, PCAS continues to be employed. Since numerous PCAS studies were recently published, the aim of this systematic review was to answer the question: based on the most recent evidence, what is the efficacy of protected carotid angioplasty with stenting (PCAS)? METHODS: Electronic, manual and bibliographic searches of Medline, PreMedline, Healthstar/OVID, EMBase, PubMed were conducted. RESULTS: Over 400 articles were identified, of which 18 studies met the inclusion criteria. The technical complication rate of

EVALUATING CLINICAL OUTCOMES FOR SUBJECTS THAT ARE NEWLY INITIATED ON HMG-COA REDUCTASE INHIBITORS IN A NATURALISTIC ENVIRONMENT USING LONGITUDINAL DESIGN

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OBJECTIVES: To evaluate lipid level changes, NCEP-ATPIII LDL-C goal attainment and time to goal in a managed care setting. METHODS: Patients were included if they began atorvastatin, fluvastatin, pravastatin, or simvastatin therapy between July 1, 1999 and June 30, 2001, and had no dyslipidemic therapy in the previous 6 months, continuous health plan enrollment, 6 months pre-index and 12 months post-index, and post-index lipid measurements. Goal attainment status was assessed at each LDL-C lab result utilizing NCEP-ATPIII guidelines. Descriptive statistics, generalized estimating equations (GEE), and Cox proportional hazard with multiple-failure data were employed for analysis. Model covariates included age, gender, coronary artery disease, diabetes mellitus, hypertension, duration of statin therapy, medication possession ratio (MPR), and baseline lipid profile. RESULTS: A total of 16,979 patients were identified for this study (fluvastatin = 1251; pravastatin = 2302; simvastatin = 5603; atorvastatin = 7823). The mean overall age of the cohort was 62 ± 13 years, 49% were male, and 58% of patients were defined as secondary prevention by NCEP-ATPIII risk criteria. The overall mean duration of therapy (persistence) was 16 ± 9 months and adherence to therapy (MPR) was 79%. The mean/median doses were as follows: atorvastatin = 14 mg/10 mg, fluvastatin = 35 mg/40 mg, pravastatin = 28 mg/20 mg and simvastatin = 24 mg/20 mg. Changes in lipid levels for atorvastatin, fluvastatin, pravastatin, and simvastatin were as follows: total cholesterol (-21%, -15%, -16%, -20%), LDL-C (-28%, -21%, -23%, -28%), HDL-C (0.1%, 1.0%, 1.0%, 1.5%), and triglycerides (-8%, -1%, -3%, -5%), respectively. The probabilities of achieving LDL-C goal and median times to goal were: atorvastatin (0.51, 236 days); fluvastatin (0.30, 379 days); pravastatin (0.35, 377 days); simvastatin (0.47, 246 days). CONCLUSIONS: Patients who were prescribed atorvastatin had significantly greater improvements in total cholesterol and triglycerides and attained LDL-C goal significantly more often evaluating each lab result independently. Changes in LDL-C and HDL-C were similar between atorvastatin and simvastatin.

recent evidence surrounding the efficacy of protected carotid angioplasty with stents

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OBJECTIVES: Carotid artery stenosis is an important risk factor for, and is also believed to cause as much as 20% all strokes. Several surgical therapies are available including carotid endarterectomy (CEA) and carotid angioplasty with stenting (CAS). Although there appear to be benefits to adopting widespread use of CAS, numerous parties have expressed concern about its safety. A number of large protected CAS (PCAS) trials are underway, however, it will be 3 to 5 years until these results are released. In the interim, PCAS continues to be employed. Since numerous PCAS studies were recently published, the aim of this systematic review was to answer the question: based on the most recent evidence, what is the efficacy of protected carotid angioplasty with stenting (PCAS)? METHODS: Electronic, manual and bibliographic searches of Medline, PreMedline, Healthstar/OVID, EMBase, PubMed were conducted. RESULTS: Over 400 articles were identified, of which 18 studies met the inclusion criteria. The technical complication rate of
PCAS was 3.3%, the overall adverse event rate was 3.1% and the 30-day mortality rate was 1.2%. A chi-square analysis of the adverse event rates revealed no clear relationship between the study group and proportion of adverse events among all 18 studies ($\chi^2 = 14.6, p > 0.10$). Multiple sensitivity analyses were conducted; however, no relationship between the study group and proportion of adverse events resulted ($\chi^2 = 11.2, p > 0.10$).

**CONCLUSION:** Although practitioners await stronger evidence, this study demonstrates the relatively low rates of adverse events in PCAS relative to CAS alone and the warranted use of PCAS.

**Abstracts**

**PCV14**

**A COMPARISON OF THE RISK OF ADVERSE THROMBOEMBOLIC AND BLEEDING EVENTS BETWEEN SUBJECTS TREATED AND NOT TREATED WITH WARFARIN**

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**OBJECTIVE:** This study was conducted to assess the risk of thromboembolic and bleeding events among atrial fibrillation patients treated with warfarin. **METHODS:** Using claims data from a large commercial health plan, patients with chronic atrial fibrillation were identified based on medical claims with diagnosis codes 427.31 and 427.32 from 1998 through 1999. Patients with valvular disease were excluded. Cox proportional hazards analysis was used to compare risk of venous, arterial, intracranial, and total thromboembolic events between warfarin exposed and unexposed subjects. Risk of bleeding events was also compared. **RESULTS:** For abciximab + stent, incremental costs were higher (+$81) but clinical outcomes were better (~18.5% major adverse cardiac events [MACE] and ~3% mortality) relative to the stent-only group. The incremental cost-effectiveness ratio for abciximab was $438 per MACE avoided and $2700 per death avoided. Abciximab + stent patients had 0.22 more adjusted life years (LYs) than the stent-only group so the incremental ratio was $368 per adjusted LYs gained. When compared to the stent-only group, eptifibatide + stent was dominant in terms of costs (Incremental = $166), MACE rate (Incremental = 7.1%) and mortality (Incremental = 2%) over the short-term. There was a 0.221LY increase for eptifibatide. SA indicated that drug acquisition and procedure costs were the major cost drivers. Results were robust. **CONCLUSIONS:** Eptifibatide and abciximab (+stenting) are considered cost-effective in the treatment of diabetic patients undergoing PCI.

**PCV16**

**DIFFERENCES IN RESOURCE UTILIZATION IN POST-MI PATIENTS WITH AND WITHOUT HEART FAILURE**

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**OBJECTIVES:** The economic consequences of heart failure (HF) in post-myocardial infarction (MI) patients can be severe. Recently there has been an increase in the availability of drugs aimed at treating or delaying the onset of post-MI HF. The objective of this study was to estimate differences in costs, number of hospitalizations and outpatient visits in post-MI patients with and without HF. **METHODS:** Claims data for patients hospitalized with a principal diagnosis of MI between 1998 and 2000 were used. Patients with a diagnosis of HF or MI in the six-months preceding the initial MI were excluded. Data on 13,682 patients for a period of 3-years following discharge for initial MI was available. The follow-up period was divided into 18 two-month intervals. Mean costs were analyzed using a two-part model (logistic and generalized linear model (GLM)), and outpatient visits and hospitalizations were analyzed using a GLM model with log-link. Clustering of observations within patients was adjusted for, and bootstrapping was used to obtain standard errors. Age, gender, type of MI, insurance type, and comorbidities...