shaped relationship to weight (BMI) indicating potential cost offsets by effective weight-loss intervention.

CARDIOVASCULAR DISEASES/DISORDERS—Clinical Outcomes

PCV37

DOES COMPLIANCE WITH ACE-I, DIGOXIN AND SPIRONOLACTONE INFLUENCE THE TIME TO EVENT IN PATIENTS WITH HEART FAILURE?

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OBJECTIVES: Patients with Heart Failure (HF) are known to have poor compliance even with medications that can help reduce mortality and events such as readmissions. We wanted to examine whether compliance with three such medications, primarily ACE-Inhibitors, Digoxin and Spironolactone would have any impact on the time to an event in HF patients. An event was defined as a readmission to hospital, an emergency room visit following a discharge from the index admission or death.

METHODS: Patients with HF who were admitted to the London Health Sciences Centre were stratified then randomized to receive either usual care education (U) or an enhanced educational intervention (I) aimed at improving compliance that was delivered in hospital, prior to discharge. Compliance data was collected from pharmacy refill data from baseline over the period of follow-up that was 12 months. A Cox Regression time-to-event analysis was run for all patients adjusting for randomization ARM and then adjusting for the covariates of interest, the minimum and mean compliance. RESULTS: Seventy-five out of 134 patients had an event. There was no difference in time to event by ARM. The inclusion of the minimum and mean compliance of each drug individually in the regression did not result in any significant changes in the time-to-event; however, there was a trend $p = 0.082$ in patients who were on spironolactone and had compliance <0.80. CONCLUSIONS: We can hypothesize that there may be a differential effect on the time to an event in this population depending upon the medication. We should be careful not to group all medication compliance into one composite number as different medications in HF have different effects on survival. This data warrants a more careful assessment of compliance for each HF medication and a determination of its effect on clinical outcomes of interest.

PCV38

LIPID LOWERING MEDICATIONS FOLLOWING CORONARY REVASCULARIZATION PROCEDURES

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OBJECTIVES: Clinical trials have demonstrated improved outcomes in patients receiving cholesterol lowering medications (CLM) following coronary revascularization and clinical guidelines recommend aggressive cholesterol lowering therapy for patients with established coronary disease. However, in routine practice, the degree to which these recommendations are followed and their impact are unknown. METHODS: Using administrative databases, we examined the use of CLM in a consecutive cohort of 11,985 elderly (average age 71.4) patients undergoing coronary revascularization from 1995 until 1997 in Quebec, Canada. RESULTS: Before revascularization, 30.9% were receiving CLM. After a 3-year follow-up, 62.8% of cohort survivors had received at least 1 prescription for CLM. CABG patients had a decreased probability of receiving CLM compared to PCI patients (OR .75 95% CI .72–.79). High-risk patients especially the very elderly (>75) had a significantly decreased probability of receiving CLM (OR .61 95% CI .57–.66). The most potent predictor of a post-operative prescription use was pre-operative utilization (OR 7.1 95% CI 6.8–7.5). An adjusted time-dependent analysis showed that patients receiving CLM had a lower risk of death (RR 0.61 95% CI 0.52–0.79) or myocardial infarction (RR 0.78 95% CI 0.64–0.93) than those not exposed to these drugs. There was no difference in the need for a repeat revascularization between the groups (RR 1.05 95% CI 0.91–1.20). CONCLUSIONS: CLM were underused in this post revascularization population and this underuse was associated with an increase in adverse outcomes.

PCV39

A REVIEW OF THE PHARMACOTHERAPEUTIC MANAGEMENT OF PULMONARY ARTERIAL HYPERTENSION

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Pulmonary arterial hypertension (PAH) is a rare, incurable and often fatal disorder of the lung in which pulmonary artery pressure rises to abnormal levels. It may either be idiopathic in nature (primary pulmonary hypertension) or a manifestation of many different disorders (secondary pulmonary hypertension). Current management includes prostacyclin vasodilator therapy, and conventional therapy consisting of calcium channel blockers, anticoagulation, oxygen therapy and diuretics; and newer agents such as bosentan, an endothelin antagonist. To date, no systematic review has assessed these interventions. OBJECTIVES: To perform a systematic review of the medical interventions used in the management of PAH. METHODS: A literature search of EMBASE and MEDLINE was performed, and studies matching the predefined inclusion criteria extracted to HTA-standardised grids and graded using the Jadad score. Data for three outcome measures survival, exercise capacity and right
the mortality rates of hypertension and diabetes grew across all primary causes of death. In cardiovascular disease (CAD) growth of the ischaemic heart disease case-fatality has decreased from 39.6% to 13%.

CONCLUSION: Although cardiovascular mortality has decreased overall, disease management for patients with CAD, diabetes, and infectious comorbidities calls for further research because these groups of patients exhibit increasing risks of dying at the ages under 65. Related premature mortality costs and productivity losses will be presented.

Abstracts

COMORBIDITIES CAUSING INCREASING MORTALITY AT AGES UNDER 65 IN CARDIOVASCULAR DISEASE AND HYPERTENSION

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OBJECTIVES: Identify combinations of cancer, cerebrovascular, diabetes, respiratory, CNS, and infectious concomitant illnesses in cardiovascular disease causing increasing risks of dying at ages under 65 and assess subsequent changes in the prevalence of these combinations.

METHODS: Combinations of multivariate linear regressions and standard SAS codes were applied to data drawn from the 1991–1996 Multiple Causes of Death Files. The 5-year numbers of deaths, cardiovascular-associated, and hypertension-associated deaths were 11,056,565, and 5,486,234 (<65 = 2,769,731), and 904,770 (<65 = 166,007), respectively. RESULTS: During 1991–1996, mortality rates in individuals with CV disease decreased: in <65–6% and ≥ 65–3%. The prevalence of cardiovascular-associated deaths has decreased from 39.6% to 39.2% of all deaths <65. The following combinations of comorbidities in individuals <65 with cardiovascular morbidity demonstrated increasing prevalence (PR), mortality rates (MR) and relative MR of <65: diabetes (PR = 12%, MR = 6%, RMR = 1.7%); CNS (PR = 13%, MR = 8%, RMR = 6%); infectious (PR = 3%, MR = 1%, RMR = 3%). In addition, diabetes in combination with cerebrovascular, cancers and respiratory comorbidities caused increased, up to 36%, risk of dying at ages under 65. A 69% (in CV+diabetes) growth of the ischaemic heart disease case-fatality was the highest increase in case-fatality across all primary causes of death. In <65, mortality rates of hypertension and with diabetes grew 14% and 26% (‘25–29’–66%), respectively. Among 55 primary causes of death in hypertension, the highest increase in case-fatality occurred for CNS diseases (dementia, psychoses, Alzheimer’s, paralysis), diabetes with renal manifestations (113%), hypertensive heart (95%), and respiratory diseases (COPD, pneumonia, asthma, emphysema). CONCLUSION: Although cardiovascular mortality has decreased overall, disease management for patients with CNS, diabetes, and infectious comorbidities calls for further research because these groups of patients exhibit increasing risks of dying at the ages under 65. Related premature mortality costs and productivity losses will be presented.

SCREENING FOR ANEURYSMS AFTER SUCCESSFUL TREATMENT FOR SUBARACHNOID HAEMORRHAGE: DO WE HAVE THE EVIDENCE?

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OBJECTIVE: Patients surviving subarachnoid haemorrhage (SAH) are at risk for recurrences despite initial successful and complete treatment. A simulation model was used to assess the merits of screening for new aneurysms and regrowth using CT angiography. METHODS: A literature review yielded incidence rates of recurrent aneurysms (regrowth and de novo), rupture and complications after diagnosis and re-intervention, and the impact of disabling cerebrovascular events in terms of (dis-) utility. We used Markov chain Monte Carlo simulation to compare “screening” and “no screening” after a first aneurysmal SAH. Various strategies with screening intervals of 2, 5 and 10 years were evaluated. We estimated expected quality adjusted life years (QALY’s), number of SAHs and morbidity and mortality rates for all strategies, including 95%CI. RESULTS: In cohort simulations of 10,000 patients the number of QALY’s ten years after clipping was virtually similar to “screening” (8.26) and “no screening” (8.32). Screening every two or five year did hardly affect the results. Screening every two years decreased SAH from 1.9% to 0.5% and mortality from 0.9% to 0.6%. The percentage of disabled patients, however, increased from 0.5% to 1.9%. Similar trends, i.e., slight QALY loss after screening, were seen with remaining life expectancy as time horizon. Conversely, we observed a slight survival benefit after screening. Screening after initial treatment with coils resulted in comparable outcomes. CONCLUSIONS: We lack accurate clinical data on incidence of recurrent aneurysms as well as subsequent risk of rupture. Also the utility score attributed to dependency after SAH or another complication is hardly substantiated. These parameters drive the results of our modeling analysis. Thus, presently we can neither recommend nor refute screening patients treated

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