Abstracts

**DIABETES**

**DIABETES—Clinical Outcomes Studies**

**ASSOCIATION OF PATIENTS’ KNOWLEDGE AND ADHERENCE TO MEDICAL ADVICE TO GLYCAEMIC CONTROL IN THE MANAGEMENT OF DIABETES MELLITUS**

Lee VV, Sin KK, Yung MS, Li MK, Chan TY

The Chinese University of Hong Kong, Shatin, Hong Kong

**OBJECTIVES:** Diabetes mellitus (DM) is a cluster of metabolic disorders, requiring chronic care. Cockram et al found that 1) a majority (62%) of those diagnosed with type 2 DM did not have access to programs providing patient education in Hong Kong, and 2) an alarming proportion (~50%) of patients with diabetes were not sufficiently informed about the risk of complications. The purpose of this study is to investigate the relationship of DM patients’ medical knowledge and adherence to medical advice to their glycaemic control. **METHODS:** The study adopted the prospective, observational study design. Patients with DM who were followed up at the specialist outpatient clinic at the Prince of Wales Hospital were recruited. Two sets of Chinese questionnaires published in Yung et al were used to assess patients’ knowledge of DM, adherence to medical advice (maximum score = 10) and 2) knowledge of signs and symptoms of hypoglycaemic attacks (maximum score = 13). Demographic information, glycosylated haemoglobin A1C (HbA1C) levels and any previous history of hypoglycaemic attacks were recorded. Pearson product-moment correlation coefficients were used to identify the associations between knowledge, adherence to medical advice and glycaemic control (SPSS, 11.5.1, Chicago). **RESULTS:** A total of 178 medical records were screened and 119 patients (53% male; age: 62.2 ± 11.7 years old; mean duration of DM: 6.8 years) were recruited. The mean HbA1C level was 7.6 ± 1.35 %. The mean scores for the 2 questionnaires were 3.30 ± 1.88 and 4.29 ± 3.07 respectively. The correlation coefficients between the scores and the HbA1C levels were 0.024 and 0.061 respectively (P > 0.05). Patients with previous history of hypoglycaemic attack scored significantly higher in the second questionnaire (mean difference = -1.784, P = 0.003). **CONCLUSIONS:** Patients’ knowledge on DM and adherence to medical advice had no association with glycaemic control.

**DIABETES—Cost Studies**

**EVALUATION OF IMPROVED UTILITY ESTIMATES IN COST EFFECTIVENESS ANALYSIS OF MULTIPLE COMPLICATIONS IN TYPE-2 DIABETES**

McEwan P1, Peters JR2, Currie CJ2

1University of Wales, Cardiff, Wales, UK; 2Cardiff Research Consortium, Cardiff, Wales, UK

**OBJECTIVES:** Several diabetes models have been developed to determine cost-effectiveness of therapy, some of which predict multiple complications. In these models, quality-adjusted life years (QALY’s) have been estimated by multiplying health utility scores for individual complications, largely due to a lack of empirical data. This study evaluated the impact of this assumption using empirical utility values to model multiple complications in patients with type-2 diabetes. **METHODS:** This study used the Cardiff Stochastic Simulation Cost-Utility Model (Dia- bForecast), which follows 10,000 newly diagnosed patients with type-2 diabetes over 20 years. We included the most reliable estimates of diabetes-related health utility scores using data from the Health Outcomes Data Repository (HODaR). The model employed baseline risk profiles used by Eastman. Utility scores were incorporated either multiplicatively (utility values for multiple complications were calculated by multiplying utility values for individual complications), or empirically (direct empirical data were used for patients with 1 and 2 complications and average utility decrements were used for subjects with ≥3 complications). QALY estimates were obtained assuming comprehensive (HbA1c = 7.2%) or standard care (HbA1c = 10%). The discount rate for benefit was 1.5%. **RESULTS:** There were 1965 (8.6%) patients with type-2 diabetes in HODaR. The overall mean utility for diabetic patients was 0.564 (SD ± 0.319) for males and 0.508 (SD ± 0.358) for females. This ranged from 0.716 (SD ± 0.267) in outpatients with no reported complications to 0.490 (SD ± 0.355) in those with ≥3 vascular events. Over 20 years, predicted QALY’s ranged from a mean of 8.3 (multiplicative) to 8.9 per patient (empirical) assuming comprehensive care. Under standard care, the QALY’s ranged from 6.8 (multiplicative) to 7.9 per patient (empirical). **CONCLUSIONS:** The model predicted variations ≥1 QALY depending on how the utility estimates were incorporated. The method chosen to value health utility for multiple complications in diabetes models can affect cost-effectiveness estimates of diabetes-related therapies.

**DIABETES—Cost Studies**

**EVALUATION OF IMPROVED UTILITY ESTIMATES IN COST EFFECTIVENESS ANALYSIS OF MULTIPLE COMPLICATIONS IN TYPE-2 DIABETES**

Smith T1, Palmer AJ2, Roze S3, Kennedy-Martin T3

1Novo Nordisk UK, Crawley, UK; 2CORE Center for Outcomes Research, Binningen/Basel, Switzerland

**OBJECTIVES:** A recent clinical trial demonstrated non-inferiority in HbA1c and hypoglycaemic events with insulin detemir (IDet) compared to NPH in a basal/bolus regimen. Mean body weight in the IDet group increased less than the NPH group (0.4 Kg vs. 1.3 Kg respectively p = 0.017). The aim of this analysis was to use a validated diabetes model to link these short-term outcomes to long-term complication rates and associated UK health care costs, and to calculate the cost-effectiveness of treatment with IDet in type-2 diabetes. **METHODS:** A validated, non-proprietorial model, The Core Diabetes Model, was used to predict: long-term complications; improvements in Life Years