the study. Propensity scores, which predicted exposure to antidepressant agents, were used to create propensity score-matched, propensity score-stratified, and propensity score-adjusted logistic regression models. **RESULTS:** A total of 44,715 patients formed the study sample. The risk estimates varied across different analytic methods. The propensity score-matched logistic regression model yielded the highest risk estimate (Relative Risk [RR] = 1.452; 95% Confidence Interval [CI]: 1.276 – 1.651), followed by the multivariable-adjusted logistic regression model (RR=1.319; 95% CI: 1.067 – 1.630) and the propensity score-stratified logistic regression model (RR=1.153; 95% CI: 1.033 – 1.287). The propensity score-adjusted regression model yielded the smallest risk estimate (RR=1.080; 95% CI: 0.968 – 1.205). **CONCLUSIONS:** Propensity score techniques using pharmacy claims data with a limited number of covariates yielded varying estimates of the treatment effect. The choice of the propensity score technique may influence the magnitude of the treatment effect estimate.

PDB12

USE OF ANTIDEPRESSANTS AND THE RISK OF DIABETES MELLITUS: A NESTED CASE-CONTROL STUDY

Khoza S, Barner JC, Lawson K, Rascati KL, Wilson JP, Bohman TM
University of Texas at Austin, Austin, TX, USA

OBJECTIVES: To determine whether current use of antidepressants is associated with increased risk of type 2 diabetes mellitus compared to former use. **METHODS:** A nested case-control study was conducted within a cohort of 35,552 patients with new antidepressant prescriptions from January 1, 2002 to December 31, 2009 using Texas Medicaid. Patients aged 18-64 years and without diabetes at cohort entry were included in the study. Antidepressant exposure was classified as current use (within 6 month of diabetes diagnosis) and former use (>6 months before diabetes diagnosis). Conditional logistic regression was used to address the study objective. **RESULTS:** A total 2,507 cases of incident diabetes and 10,028 matched control patients were identified. The average age was 44.9 (SD=13.0) and the majority (75.6%) were female. Compared to former use, current use of antidepressants was associated with a 2.1-fold increase in the risk of diabetes (Odds Ratio [OR] = 2.108; 95% Confidence Interval [CI]: 1.520 – 2.923). Compared to former use, current use of tricyclic antidepressants (TCAs; OR=2.279; 95% CI: 1.344 – 3.865), selective serotonin reuptake inhibitors (SSRIs; OR=2.241; 95% CI: 1.539 – 3.263), serotonin-norepinephrine reuptake inhibitors (SNRIs; OR=1.938; 95% CI: 1.135 – 3.310), and Other (OR=1.769; 95% CI: 1.090 – 2.872) were associated with an increased risk of diabetes. Among current antidepressant users, there were no significant differences in the risk of diabetes for SSRIs (OR=0.833; 95% CI: 0.564 – 1.232), SNRIs (OR=0.787; 95% CI: 0.480 – 1.280), and Other (OR=0.673; 95% CI: 0.428 – 1.057), compared to TCAs. **CONCLUSIONS:** Compared to former use, current use of antidepressants was associated with a two-fold increase in the risk of diabetes mellitus. This association was also observed when current users of TCAs, SSRIs, SNRIs, and Other antidepressants were compared with former users.

PDB13

USE OF ANTIDEPRESSANTS AND THE RISK OF DIABETES MELLITUS: A RETROSPECTIVE COHORT STUDY

Khoza S, Barner JC, Lawson K, Rascati KL, Wilson JP, Bohman TM
University of Texas at Austin, Austin, TX, USA

OBJECTIVES: To determine whether: 1) use of antidepressants, compared to benzodiazepines, increases the risk of type 2 diabetes mellitus; 2) individual antidepressant classes, compared to benzodiazepines, increases the risk of type 2 diabetes; and 3) there are differences in the risk of type 2 diabetes among antidepressant classes. **METHODS:** A retrospective cohort study using the Texas Medicaid prescription claims database was conducted from January 1, 2002 to December 31, 2009. Patients aged 18-64 years with new prescriptions for antidepressant agents (exposed) and benzodiazepines (unexposed) and without diabetes at cohort entry constituted the base study population. Logistic regression analyses were used to address the study objectives. **RESULTS:** A total of 44,715 patients formed the study sample. Of these, 35,552 were exposed and 9,163 were unexposed. The average age was 38.6 (SD=14.2) and the majority (69.3%) were female. Use of antidepressants was associated with an increased risk of diabetes (Relative Risk [RR] = 1.396; 95% Confidence Interval [CI]: 1.126 – 1.729) compared to benzodiazepine use, after controlling for age, gender, medication adherence, persistence, number of diabetogenic medications, Chronic Disease Score, treatment duration, and year of cohort entry. Compared to benzodiazepines, tricyclic antidepressants (TCAs; RR=1.445; 95% CI: 1.057 – 1.977), serotonin-norepinephrine reuptake inhibitors (SNRIs; RR=1.593; 95% CI: 1.160 – 2.186), and selective serotonin reuptake inhibitors (SSRIs; RR=1.317; 95% CI: 1.037 – 1.673), were associated with an increased risk for diabetes. Compared to TCAs, there were no significant differences in the risk of diabetes for SSRIs (RR=0.876; 95% CI: 0.678 – 1.132), SNRIs (RR=1.003; 95% CI: 0.734 – 1.371) and Other antidepressants (RR=0.785; 95% CI: 0.582 – 1.058). **CONCLUSIONS:** Overall, use of antidepressants was associated with an increased risk of diabetes mellitus compared to benzodiazepine use. This association was also observed when tricyclic antidepressants, selective serotonin reuptake inhibitors, and serotonin-norepinephrine reuptake inhibitors were compared to benzodiazepines.

PDB14

USING HEALTH OUTCOMES MODELING TO ASSESS THE BENEFIT-RISK PROFILE OF EXENATIDE ONCE-WEEKLY VERSUS INSULIN GLARGINE FOR PATIENTS WITH TYPE-2 DIABETES

Garrison L[1], Best JH[2], Robertson JC[1], Wenten M[2], Bruhn D[3]
[1]*University of Washington, Seattle, WA, USA,* [2]*Amylin Pharmaceuticals, Inc., San Diego, CA, USA,* [3]*Eli Lilly and Company, San Diego, CA, USA*

OBJECTIVES: Understanding the benefit-risk profiles of medications for type 2 diabetes (T2D) is of high public health interest. We assessed the potential comparative health benefits and risks of exenatide once weekly (ExQW) compared to insulin glargine (IG) under various assumptions about hypothetical risks from pancreatic and thyroid cancer associated with either treatment. **METHODS:** Safety and efficacy data from the randomized controlled DURATION-3 trial were incorporated into the CORE Diabetes Model to predict long-term health outcomes; pancreatic and thyroid cancer risks from SEER (general population); i3/MarketScan claims databases (T2D and/or therapy) were incorporated into derived Markov model. Incremental net health benefit (INHB) was estimated in life years (LYs) and quality-adjusted life years (QALYs) (both discounted at 3%) for different time horizons (base case=30 years) and different assumptions about cancer risks. The incidence rate of pancreatic cancer was 1.17/10,000 population/year. In the base-case scenario no increased pancreatic cancer risk from ExQW and relative risk (RR) of 1.25 for IG was assumed. The risk for thyroid cancer was assumed same as in general population and equal for ExQW and IG. In two alternative scenarios for pancreatic cancer risk: a) assuming IG RR=1.33 and ExQW having no increased risk, and b) assuming ExQW RR=1.07 and IG RR=1.25. **RESULTS:** The INHB for ExQW versus IG was 0.118 Lys and 0.239 QALYs in basecase; 0.119 LYs and 0.239 QALYs in scenario a); and 0.118 LYs and 0.238 QALYs in scenario b). Neither scenario a) or b) changed INHB by more than1%. The INHB for ExQW remained positive under different assumptions about time horizon and risk levels. **CONCLUSIONS:** In all scenarios modeled, the INHB for ExQW was positive compared to IG. This study suggests that the potential benefits from ExQW in reducing established T2D complications are expected to outweigh hypothetical risks from pancreatic and thyroid cancer.

PDB15

SHORT-TERM ASSOCIATION OF ANTIDEPRESSANT DRUG USE, LIFE-STYLE RISK FACTORS AND NEW-ONSET DIABETES

Wilkins TL, Sambamoorthi U
West Virginia University, Morgantown, WV, USA

OBJECTIVES: The objective of the current study is to assess the short-term association between antidepressant drug use and the risk of new-onset diabetes using two years of observation. **METHODS:** This study used the longitudinal data on 26,990 adults over age 21 from the Medical Expenditure Panel Survey (MEPS), a large-survey of families and individuals to produce national estimates of health-care use and expenditures. We pooled longitudinal data for years 2004-2007. Depression and diabetes status were identified from the MEPS household files and medical condition files. Antidepressant use was derived from prescription drug reports. Chi-square tests and logistic regressions were used to examine the link between antidepressant use interacted with depression, and new-onset diabetes, after controlling for demographic, socio-economic, healthcare access, health status, and life-style risk factors (obesity, smoking, and physical activity). The independent variables were entered in blocks. **RESULTS:** Antidepressants use was reported in 11% of individuals. In unadjusted models, the risk of new-onset diabetes was significantly increased for persons using antidepressants with depression **((AOR=2.12)** compared with those who did not have either. When lifestyle risk factors were entered in the model, statistical significance disappeared. Independently, lifestyle risk factors significantly increased the risk of new-onset diabetes: hypertension, lipid disorders, obesity, and no physical exercise. **CONCLUSIONS:** We found no association between new onset diabetes and antidepressant use and confirmed the association between life-style risk factors and new-onset diabetes. Future studies on the risk of new-onset diabetes by duration and intensity of antidepressant use and depressive symptoms are needed.

PDB16

DIABETES MELLITUS TYPE 2 AND T2DM PLUS HYPERTENSION IN BRAZIL: THE EPIDEMIOLOGIC PROFILE OF THE POPULATION REGISTERED IN THE GOVERNMENT PROGRAM HIPERDIA

Nasciben V, Melo TG
Boehringer Ingelheim Brazil, Sao Paulo, Brazil

OBJECTIVES: Diabetes represents a burden to the health care system due to its increasing rates of incidence, morbidity and mortality. Epidemiological data is crucial for policy and decision making to clarify gaps in the current health program and to develop new ones. We decided to review the status of the population registered at Hiperdia program in order to better understand the real situation of these diseases. **METHODS:** HIPERDIA is a program for monitoring hypertensive/ diabetic outpatients under the public healthcare system care. Based on that database, we searched the general profile of this population from 2002 until 2010 focusing on type 2 diabetes (T2DM) and T2DM plus hypertension, and also geographical distribution, gender, age and overweight/ obesity prevalence were raised. **RESULTS:** From 2002 to 2010, a total of 2,199,972 people with T2DM and T2DM plus Hypertension were registered in the database, with 12.5 % presenting T2DM only and 87.5 % with both conditions, which represents about 1.5% of the total population under the public healthcare system. For patients with T2DM only we found 114,836 men and 159,581 women (41.8% and 58.2%) and for patients with both conditions we found 619,005 men and 1,306,550 women (32.1% and 67.9%). Regarding age, the majority of the patients are in between 50 - 70 years-old. Almost 50% of the patients are distributed within 5 states SP, MG, BA, PR and RJ. Overweight or obesity was present in 48% of this population. **CONCLUSIONS:** In accordance with epidemiological data, most of the diabetic patients in this database are middle-age, women and almost half of them are obese or overweight. Added to that, our estimates about diabetes prevalence were different from the number reported by the Brazilian MoH at 2008 (9.7%).