FP levels (MD -2.17 [CI 95% -2.44, 1.91], p<0.001) and body weight (MD -2.91 [CI -3.50, -2.32] after 26 weeks as compared to placebo. The risk of occurrence of urinary tract infections (RR 1.25 [95% CI 0.80, 1.94]), genital mycotic infections among males (RR 8.73 [95% CI 2.07, 36.72, p=0.003]) and females (RR 4.37 [95% CI 2.03, 9.38, p=0.0002]) was higher in the canagliflozin arm as compared to placebo arm. CONCLUSIONS: Canagliflozin significantly reduced FBGI, FP levels and body weight while increasing the risk of urinary tract infections and genital mycotic infections as compared to placebo among patients with inadequately controlled T2DM.

PDB25

ANTIDIABETIC THERAPIES AND THE RISK OF ACUTE PNEUMONIA: A NATIONWIDE RETROSPECTIVE COHORT STUDY FROM TAIWAN

Chang Y1, Hsieh C1, Singh S1, Wang W1, Tai Y1, Huang W2
1National Yang-Ming University, Taipei, Taiwan, 2Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, Johns Hopkins Medicine, Baltimore, MD, USA, *The George Washington University, Washington, DC, USA, 2National Yang Ming University, Taipei, Taiwan.

OBJECTIVES: To examine the relationship between different anti-diabetic therapies (DPP-4, metformin and sulfonylureas) and risk of acute pneumonia among adult patients in Taiwan.

METHODS: We derived a nationwide retrospective cohort of patients with type 2 diabetes in Taiwan. The inclusion criteria are adult diabetic patients with continuous baseline enrollment, new users of the studied drugs, and without missing demographics. There were 4,113/101,498/44,772 DPP-4/Metformin/Sulfonylureas users. Adjusted hazards ratios for pneumonia associated with DPP-4, derived from Cox Proportional Hazard models with propensity score weighting, were estimated, dose-response analyses were also conducted. RESULTS: DPP-4 was statistically significantly associated with a decreased risk of acute pneumonia compared to sulfonylureas (adjusted HR: 0.56; 95% CI 0.41-0.77) and metformin (adjusted HR: 0.69, 95% CI 0.51-0.94), while per unit increase in likelihood ratio score was lower risk of pneumonia than sulfonylureas (adjusted HR: 0.53; 95% CI 0.37-0.76). In addition, low-dose metformin was statistically significantly associated with a lower risk of pneumonia compared to placebo (HR 0.72, p<0.001) and high-dose metformin (HR 0.90, adjusted p=0.08). CONCLUSIONS: Our findings suggest that sulfonylureas may potentially be associated with a higher risk of pneumonias compared to DPP-4 or metformin. This population-based cohort study extends the previous evidence in an ethnic Chinese adult T2D population. Studies with more outcomes, larger sample size, and more precise capture of confounders may be needed to determine the risk of pneumonias associated with Incretin based therapies.

PDB26

REAL-WORLD ADHERENCE IN MEDICARE PATIENTS WITH TYPE 2 DIABETES MELLITUS (T2DM) FOR EXENATIDE QW AND LIRAGLUTIDE QD

Tzou A1, Nguyen H1, Robitaille M2, Hsieh C1, Lafeuille M1, Chiang Y1, Tasi Y1, Vupputuri S2, Schneeweiss S1, Bartels D1, Seeger JD1
1Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA, 2Boehringer Ingelheim GmbH, Ingeheim, Germany

OBJECTIVES: To examine the real-world adherence to and persistence with exenatide QW and liraglutide QD among patients with type 2 diabetes in Medicare Part D. The aim was to assess the real-world adherence to these two GLP-1 receptor agonists (GLP-1 RAs) in the Medicare population.

METHODS: We conducted a retrospective cohort study of patients enrolled in Medicare Part D who initiated exenatide QW (n=22,693) or liraglutide QD (n=537) or liraglutide from January 1, 2013 to December 31, 2017. We compared the adherence to exenatide QW and liraglutide QD between these two groups using a propensity score (PS)-matched population and in another US commercial insurance database (MarketScan). RESULTS: Of 155,545 T2DM patients initiating a NIDM, 46.8% initiated liraglutide (P=0.0001). Patients initiating liraglutide had a higher mean days covered (PDC) (77.5% and 75.8%, respectively, p=0.01) less likely to be adherent than patients on exenatide QW (73.8% and 75.0%, respectively). Two other significant factors associated with lower adherence were: evidence for cardiovascular disease and plan type. The mean proportion of days covered showed patients on exenatide QW had a slightly higher mean persistence rate of GLP-1 RA compared to patients on liraglutide QD: 63.5% vs. 61.5% (ns). CONCLUSIONS: Results from this retrospective study suggest that overall adherence to GLP-1 RAs was low, but was better with exenatide QW. Patients 65 years and older treated with exenatide QW had a significantly higher adherence rate compared to liraglutide QD. Further research is needed to validate these findings in other patient populations.

PDB27

GLYCATED HEMOGLOBIN (HbA1C) CONTROL IN PATIENTS WITH TYPE 2 DIABETES MELLITUS (T2DM) TREATED WITH CANAGLIFLOZIN IN A REAL-WORLD SETTING

Lefebvre D1, Pilon D2, Robitaille M1, Lafeuille M1, Chow W3, Pfeifer M2, Duh M4
1Groupe d’analyse, LIAmê, Montreal, QC, Canada, 2Groupe d’analyse, LIAmê, Montreal, QC, Canada, 3Cedars-Sinai Medical Center, Los Angeles, CA, USA, 4University of Southern California, Los Angeles, CA, USA

OBJECTIVES: Canagliflozin (CANA), an agent that inhibits sodium glucose co-transporter 2, has been shown to improve glycemic control in patients with T2DM in clinical trials. The current study describes the real-world clinical characteristics and glycemic control of T2DM patients receiving different doses of CANA following approval of CANA in a real-world setting.

METHODS: Adults with ≥1 diagnosis for T2DM and ≥6 months of clinical activity before first CANA prescription (index) were identified from the Cardiovascular StratificatioN US electronic medical record. Patients in which 60% of contributors are primary care providers. Patients were stratified by their first CANA dose daily (100mg [CANA100] or 300mg [CANA300]) observed in the database. Patients’ clinical characteristics, therapies prescribed, and HbA1C values at baseline and 6 months after the index date were compared using union combination t-test to evaluate glycemic control associated with CANA.

RESULTS: A total of 9,805 CANA users were identified, among which 6,571 (67%) were in the CANA100 group (mean age 59; 48% female; 75% white; mean Charlson Comorbidity Index [CCI] 1.8; mean Diabetes Complications Severity Index [DCSI] 0.9) and 3,234 (33%) were in the CANA300 group (mean age 57; 44% female; 75% white; mean CCI 1.6; mean DCSI 1.3; p=0.0001). Before treatment initiation, CANA and T2DM significantly improved ≤1 anti-hyperglycemic agent, with a mean number of 5.6 and 5.5 antihyperglycemic agents per patient in the CANA100 and CANA300 groups, respectively. In the 6 months following CANA initiation, HbA1C values decreased from 8.4% to 7.9% (p<0.0001) among CANA100 patients and from 8.5% to 7.8% (p<0.0001) among CANA300 patients. CONCLUSIONS: Patients treated with CANA in the real-world setting often received multiple prior diabetes treatments and had uncontrolled HbA1c levels. Patient’s improved HbA1c values in those with CANA300 mg, with numerically greater improvement in those with CANA 300mg.