EVALUATION OF DIFEPTIPIPE-4 INHIBITORS ON HEMOGLOBIN A1C IN PATIENTS WITH TYPE 2 DIABETES MELLITUS AND RENAL IMPAIRMENT: A SYSTEMATIC REVIEW AND META-ANALYSIS

Sahuvaly W1, Means ES2, Zaccaro EI, Doleh Y3, Coleman CI2
1University of Connecticut, Storrs, CT, USA, 2University of Connecticut/Harford Hospital Evidence-Based Practice Center, Hartford, CT, USA

OBJECTIVES: Type 2 diabetes is a progressive disease and most patients experience deterioration in glycemic control over time necessitating the use of combination therapies to achieve glycemic control and safety. We sought to summarise the comparative efficacy and safety of third line antidiabetic agents in patients with type 2 diabetes after failure of metformin and TZD therapy.

METHODS: We performed a literature search of MEDLINE and CENTRAL through May 2014 and included randomized controlled trials (RCTs) of ≥12-weeks duration evaluating the addition of a noninsulin agent in patients with type 2 diabetes inadequately controlled on stable, optimized metformin and TZD therapy (≥1500mg metformin and ≥50% maximum TZD dose for ≥4 weeks). Network meta-analysis was performed on identified trials. Endpoints of interest were changes from baseline in HbA1c, body weight, systolic blood pressure (SBP), and the risk of hypoglycemia, urinary (UTI) and genital tract infection (GTI). RESULTS: Eleven RCTs comparing DPP-4 inhibitors with placebo or metformin were included. All SUs were associated with significant weight gain (range, 3.3-7.29 kg), while significant weight loss was seen with all GLP-1 analogs (range, 1.53-2.2 kg) and SGLT-2 inhibitors (range, 2.08-2.65 kg). A reduction in SBP was seen in canagliflozin and GLP-1 analogs (range, 2.39-5.05 mmHg). The relative risk (RR) of confirmed hypoglycemia was significantly increased with dulaglutide, exenatide and glimepiride vs. placebo (RR range, 2.65-6.17), and was higher (RR>1.0) than all other agents except linagliptin. No agent reported an increased risk for UTI or GTI vs. placebo. CONCLUSIONS: In conclusion, when added to stable, optimized metformin and TZD therapy, all noninsulin antidiabetic agents reduced HbA1c, but differed in their effects on body weight, hypoglycemia and SBP.

PDB15 COMPARATIVE EFFICACY AND SAFETY OF ANTIDiABETIC DRUG REGIMENS ADDED TO STABLE METFORMIN AND TZD THERAPY IN PATIENTS WITH TYPE 2 DIABETES

Sahuvaly W1, Means ES2, Zaccaro EI, Doleh Y3, Coleman CI2
1University of Connecticut, Storrs, CT, USA, 2University of Connecticut/Harford Hospital Evidence-Based Practice Center, Hartford, CT, USA

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PDB18 EFFICACY AND SAFETY OF INSULIN ANALOGUES COMPARED TO HUMAN INSULIN IN PATIENTS WITH TYPE 1 DM (1): SYSTEMATIC REVIEW AND META-ANALYSIS

Querrey Junior AS1, Araujo VE1, Ibori JR2, Diniz LM2, Silva MR3, Mata AR4, Nascimento RC1, Alvesa J1, Accurio F1
1College of Pharmacy, Federal University of Minas Gerais, Belo Horizonte, Brazil, 2Medical College, Federal University of Minas Gerais, Belo Horizonte, Brazil

OBJECTIVES: The use of insulin analogues for the treatment of the diabetes mellitus types requires an individualised treatment according to the real patient needs and the most current evidences. The aim of this study was to compare the efficacy and safety of insulin analogues with human insulin preparations in the treatment of type 1 diabetes. METHODS: Literature review with meta-analysis of randomized controlled trials (RCTs) available in PUBMED, LILACS, CENTRAL (accessed February/2014), including gray literature search. The meta-analysis was performed using Review Manager® 5.2 software using random effects model. RESULTS: There is poor evidence for the recommendation of first-line therapy, insulin rescue was delayed by 1.7 years on average for CANA titrated to goal (7.8% at baseline) compared to DAPA (7.0% at baseline). The benefit was delayed by 1.8 years on average for CANA titrated to goal (5.1 years) versus DAPA (3.3 years). Much of the difference was driven by the ability to titrate to CANA 300 mg for additional glucagon control. These simulations suggest that treatment with CANA versus DAPA could delay insulin initiation by 55% in both dual and triple therapy. This difference may translate into delays in undesirable health outcomes and the financial burden associated with injectables with actual practice.

PDB19 METFORMIN AND INTENSIVE LIFESTYLE INTERVENTION FOR PRE-DIABETES - SYSTEMATIC REVIEW OF Efficacy

Faul PM1, Junqueira M1, Restrepo M2, Turatti LA3
1Medical College of Wisconsin, Milwaukee, WI, USA, 2Hospital of São Paulo, Brazil, 3UNIFESP, Sao Paulo, Brazil

OBJECTIVES: Individuals with an A1C between 5.7% and 6.4%, impaired fasting glucose (from 100mg/dl [5.6mmol/l] and 125mg/dl [6.9mmol/l] or glucose impaired tolerance [oral glucose tolerance test (2-hour) between 140mg/dl [7.8mmol/l] and 199mg/dl [11.0mmol/l]) are classified as having pre diabetes at are increased risk for development.