**DIABETES/ENDOCRINE DISORDERS – Clinical Outcomes Studies**

**PDB1**

**EVALUATION OF ACUTE PANCREATITIS SIGNALS WITH INCRETIN ENHANCERS: REVISITING DISPROPORTIONALITY ANALYSIS OF THE ADVERSE EVENT REPORTING SYSTEM**

Aliak

**OBJECTIVES:** There has been a rising concern about the association between incretin enhancers and acute pancreatitis (AP). Previous research showed conflicting findings, and this analysis of the FDA Adverse Event Reporting System (FAERS) aims at investigating signals of AP across pharmacological classes of anti-diabetes medications (ADM) and within incretin enhancers class. **METHODS:** Adverse event reports submitted to FAERS between 1997Q3-2012Q1 were analyzed. The outcome was defined by MedDRA Preferred Term (PT) “pancreatitis acute”, exposures were defined by generic names of ADM. Sensitivity analyses were conducted by creating a custom term (CT) for outcome: “autoimmune pancreatitis”, “ischemic pancreatitis”, “pancreatitis”, “pancreatitis acute”, “pancreatitis hemorrhagic”, and “pancreatitis necrotizing”. Reports of other pancreatic disorders were excluded. Disproportionality analysis by proportional reporting ratio (PRR) and 95% confidence interval (LLQ5-UL95) is applied to detect AP signals compared to all ADM. Associations with LLQ5<2 are significant signals. **RESULTS:** A total of 1183 AP events and 4481 CT reports for ADM were identified (incretin enhancers, n=912 and n=3,704, respectively). Corresponding PRR and (LLQ5-UL95) were: metformin 0.98 (0.83-1.16) and 0.52 (0.47-0.59); sulfonylureas 0.53 (0.37-0.75) and 0.35 (0.28-0.43); thiazolidinediones 0.12 (0.09-0.16) and 0.12 (0.10-0.14); meglitinides 0.54 (0.31-0.93) and 0.52 (0.47-0.59); sulfonylureas 0.53 (0.37-0.75) and 0.35 (0.28-0.43); thiazolidinediones 0.12 (0.09-0.16) and 0.12 (0.10-0.14); meglitinides 0.54 (0.31-0.93) and 0.52 (0.47-0.59); incretin enhancers 1.94 (1.87-2.00) and 2.09 (2.06-2.12); and combinations 0.65 (0.47-0.88) and 0.81 (0.70-0.93). Compared to all ADM, estimates for incretin enhancers were: exenatide 1.46 (1.37-1.55) and 1.54 (1.49-1.59); liraglutide 4.90 (4.37-5.48) and 4.00 (2.73-4.28); saxagliptin 4.47 (3.00-6.67) and 4.60 (3.73-5.67); and sitagliptin 2.33 (1.95-2.78) and 4.02 (3.75-4.31). There were no reports of AP PT for liraglutin, but 39 reports of CT with estimates of 6.41 (4.64-8.85) were identified. **CONCLUSIONS:** Compared to other ADM, incretin enhancers are associated with higher than expected reporting of AP. Prescribers should monitor patients with diabetes for signs and symptoms of pancreatitis while treated with incretin enhancers. Given limitations of spontaneous reporting systems, pharmacoepidemiological studies are required to test the generated hypothesis and to draw clinically rigorous conclusions.