

Comparison of adverse effects among different GLP-1 receptor agonists added to basal insulin and between GLP-1 receptor agonists and basal Insulin versus basal-plus or basal-bolus insulin in type 2 diabetes



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Abstract

Diabetes mellitus type 2/ DM2/ - is increasing in incidence in United States and throughout the world mostly due to increasing Obesity epidemic- around 40 % of adult people in USA. Two are the major defects of the disease- insulin resistance which sets up the stage 4-7 years before DM type 2 is diagnosed and relative to the increased resistance insulin deficiency. After the diagnosis of DM type 2 the Insulin resistance stays usually constant while the Insulin deficiency progresses necessitating the intensification of the therapy and eventually the need of Insulin. Initially the insulin is started usually as a basal and eventually as the DM type 2- progresses we add bolus rapid acting insulin to major meal- basal plus regimen/BP/ and eventually to every meal- basal- bolus /BB/ insulin. This intensification of the therapy is frequently able to control DM type 2, but leads to significant 3-4 kg weight gain with risk of hypoglycemia.

Other option of intensification of the therapy of DM type 2 is to add to the oral anti - diabetic medications only basal Insulin and GLP1- RAs. GLP1-RAs decrease post prandial blood sugar as the rapid acting insulin does and the long acting GLP1-RAs also decrease fasting blood sugar. GLP1- RAs suppress the appetite and theoretically might lead to weight loss and less incidence of hypoglycemia compare to BP/BB Insulin regimens, because they act on glucose dependent manner- increase the endogenous insulin production only if the blood sugar is elevated.

In our meta- analysis we concentrated our efforts into looking at the side effect of GLP 1- RAs and basal- Insulin combination compare to BP/BB insulin combination like weight loss/gain, incidence of hypoglycemia, adverse events- mainly the gastrointestinal ones.

Our secondary end point was the change in HbA1c between GLP1-RAs and basal insulin group compare to BP/BB insulin group in patients with HbA1c 7-11%.

This is the first meta- analysis as far as us now comparing those 2- combinations - BB/BP insulin to GLP1-RAs and basal insulin in the terms of looking as a primary end point at the side effects of those combinations.

Biography:

Andrey Emanuilov Manov graduated from the Medical University Sofia Faculty of Medicine in 1984. He works in Fort Worth, TX and 3 other locations and specializes in Endocrinology, Diabetes and Metabolism, Internal Medicine and Other Specialty. He is affiliated with John Peter Smith Health Network.



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