

SESSION 2 ADULT SESSION

USE OF ADJUNCTIVE THERAPIES AND OBESITY MEDICATIONS IN DIABETES



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EPIC DIABETES CONFERENCE

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EMPOWERING PATIENTS
FOR
INDIVIDUALIZED CARE



CONFLICTS OF INTEREST

Research support: Diasome pharmaceuticals Inc.



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OVERWEIGHT & OBESITY

- Overweight(OW)/Obesity (OB): chronic disease with numerous metabolic, physical, and psychosocial complications → presents a risk to health (WHO)
- Treatment is indicated in people who have OW/OB complicated by other chronic medical conditions in the setting of Body Mass Index (BMI) >30
- BMI is a flawed indicator: Waist-Hip ratio, Hip-Height Ratio measurements are more useful
- Many treatment options to help manage weight especially in the setting of Diabetes.
- Ideal agent: Manage weight and improve diabetes control with minimal side effects

OVERVIEW

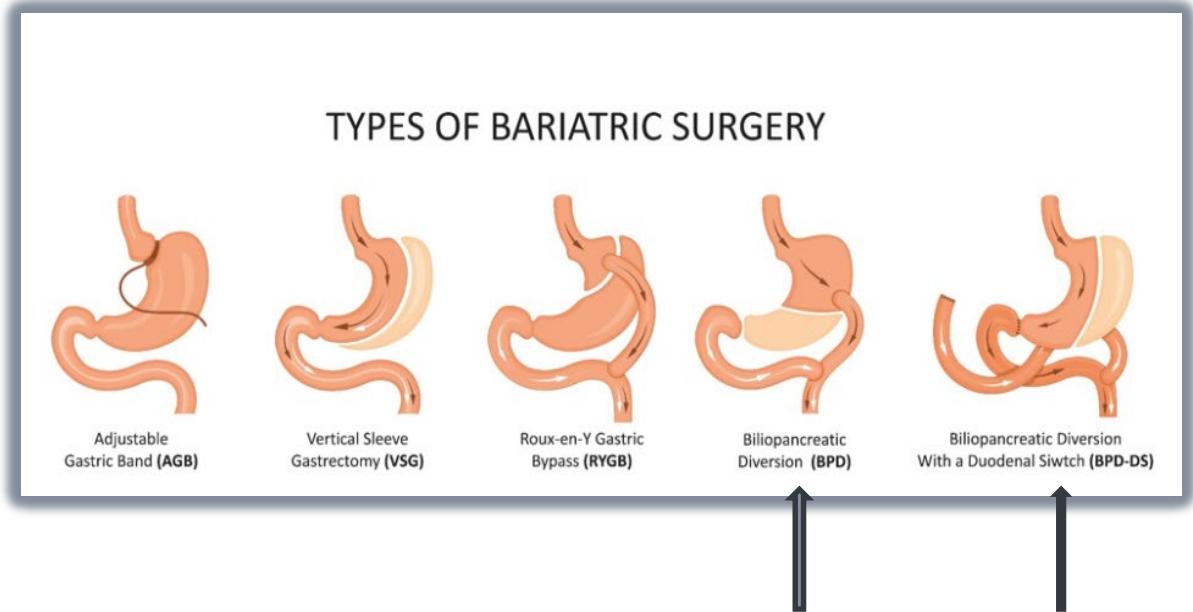


WHAT IS SUCCESS?

Bariatric surgery is the current Gold Standard

→ weight loss of 25-30%

- Major surgery
- Nutritional/vitamin deficiencies
- Post-surgery hypoglycemia
- Dumping syndrome
- **Experienced centers** with multidisciplinary team for pre and post-op management
- 25-35% of patients are considered “secondary non-responders” → have regained some or most of the weight back



PHARMACOLOGIC MANAGEMENT OF OBESITY

**** NOT CURRENTLY FDA APPROVED FOR USE IN TYPE 1 DIABETES ****



THE OTHER END OF THE SPECTRUM

- The “gliptins” aka Dipeptidyl peptidase 4 (DPP4) inhibitors- Sitagliptin (**Januvia**), Linagliptin (**Tradjenta**) , Alogliptin (**Nesina**) , Saxagliptin (**Onglyza**)
- Lower glucose by
 1. Increasing chemicals that increase insulin release by the pancreas
 2. Decrease the release of glucose by the liver
- Weight neutral- due to lower risk of hypoglycemia, may lead to less weight gain (less snacking)

THE OTHER END OF THE SPECTRUM...

- Metformin → around since the 1950's, FDA approved 1994
- Lowers blood glucose by
 1. Reducing the release of glucose by the liver
 2. Increases absorption of glucose from the bloodstream
- Weight loss mechanism discovered recently* – produces a hunger suppressing molecule
- Average weight loss of 2-5% proportionate to length of use
- Cheap and easily available. + impact on memory/stroke risk, r/o certain cancers
- Gastrointestinal issues, limited use in patients with kidney issues



THE OTHER END OF THE SPECTRUM...

- The “Flozins” : Empagliflozin (Jardiance), Dapagliflozin (Farxiga), Canagliflozin (Invokana) and **Sotagliflozin (Inpefa)***
- Increase the amount of sodium and glucose excreted by the kidneys
- Beneficial effects on the kidneys & heart
- Improves heart function
- \uparrow Glucose excretion \rightarrow calorie deficit \rightarrow weight loss
- Weight loss of 1-3%

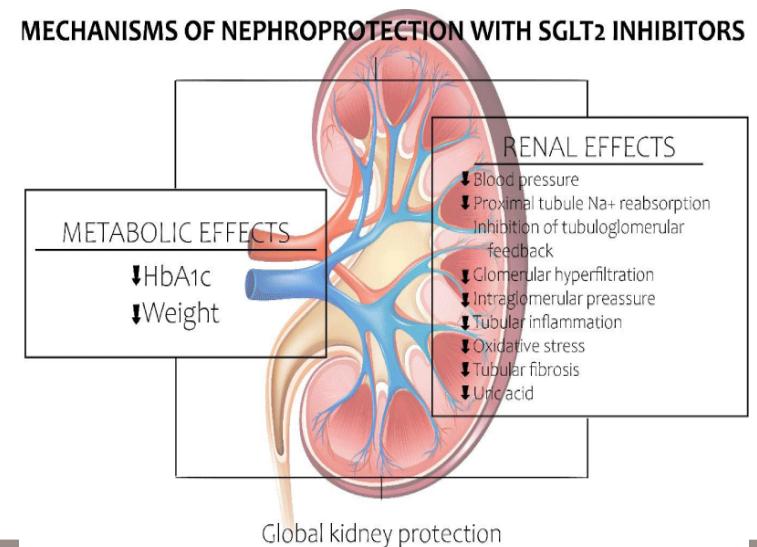


Fig. courtesy Journal of Clin Nephrology

THE BIG GUNS

Glucagon like peptide receptor agonists

Liraglutide – Victoza

Dulaglutide- Trulicity

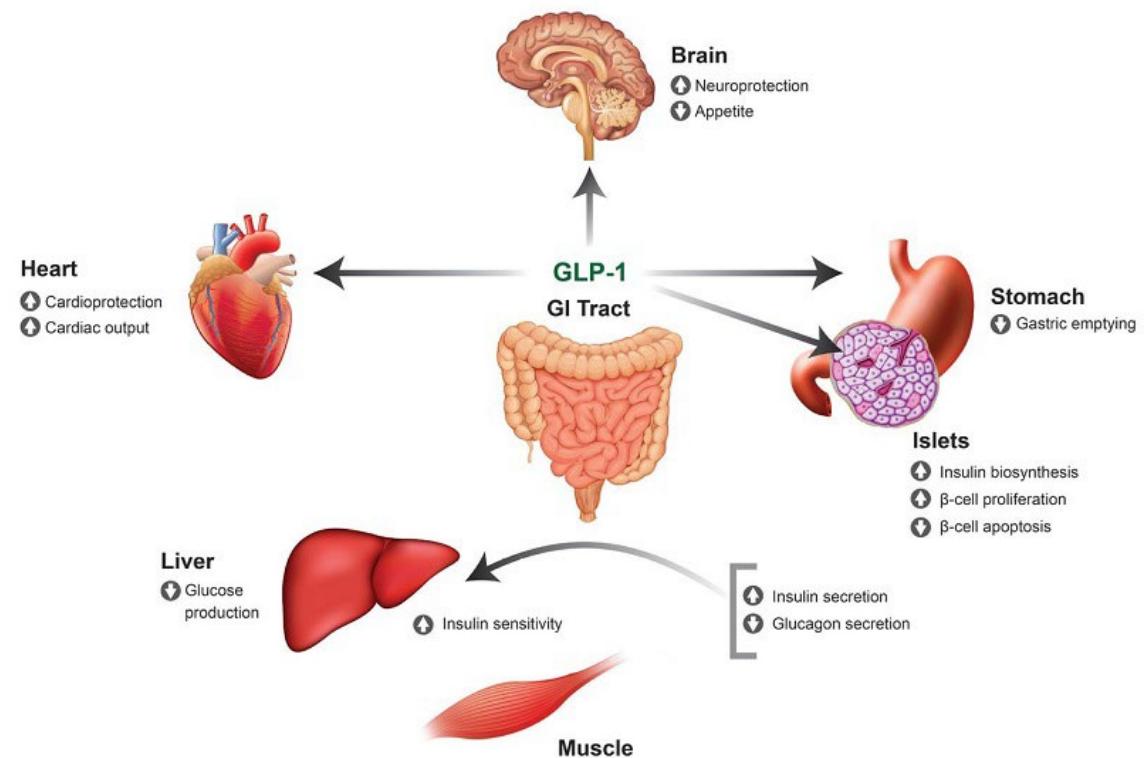
Semaglutide - Ozempic, Wegovy

Tirzepatide – Mounjaro (acts on additional receptor)



GLP 1 AGONISTS: THE FINAL FRONTIER

- Slows down stomach emptying- ++ satiety
- Effects on the reward center of the brain : sugary foods don't hold the same appeal
- Effects on taste buds: alter the perception of sweet foods and makes it less desirable
- **Semaglutide and Tirzepatide approaching the success of bariatric surgery (15-18% and ~20-25% weight loss).**
- **Retatrutide – triple receptor agonist currently in Phase 3 trials, has shown 25-30% weight loss**



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TOO GOOD TO BE TRUE?

- Off-label use in limited patients with Type 1 diabetes
- Increase risk of diabetic ketoacidosis → require close monitoring during the first 3 months and with any dose escalation
- Increased risk of gastroparesis – avoid in patients suspected of having gastroparesis
- Increased risk of retinopathy progression especially in the first few months due to improved blood sugar control
- Precautions need to be taken for surgeries
- Contraindicated in pregnancy



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CONCLUSIONS

- OW/OB is a growing health concern worldwide but especially more so in our diabetic patients
- ~60% of Type 1 diabetics now in the OW/OB category with very few medications approved for use for treatment of Obesity
- Lifestyle changes MUST be used in conjunction with any treatment option
- Bariatric surgery used to be the Gold Standard of success in treatment of Obesity but likely not for long
- Several medication options now available with varying degrees of success in weight management
- **Insurance however may not cover these and they can be very expensive**
- Close follow up with your medical team is crucial in ensuring success and minimizing risks