Mastering Weight Loss: GLP-1's Revolutionary Role Transcript

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Introduction to GLP-1 Medications

Hi, everyone. It's Dr. Jen for a mini talk. And today we're going to talk about the GLP-1s and the GLP-1 GIPs And what am I saying right? Okay, well, the GLP-1s, they are peptides that you have heard about in the news.

Semaglutide and semaglutide has the brand names Ozempic or wegovy and these are administered via subcutaneous injection usually in the abdomen. What is GLP-1 stand for?

Stands for glucagon like peptide one. This is an incretin hormone secreted by the intestine in response to food intake secreted by the all cells in the intestines, specifically in response to the food intake.

Stimulates insulin secretion from our pancreatic beta cells in a glucose dependent manner.

How GLP-1s Work and Common Side Effects

So this means it enhances insulin release when the blood level sugar blood sugar levels are high and inhibits glucagon secretion from the pancreas. Alpha cells, and this helps reduce glucose levels, helps slow gastric emptying, and this leads to increased satiety and reduced appetite.

And a lot of people with the GLP-1. So this is where they say that, you know, maybe they get constipated from slower motility of the GI tract. and then we also hear case studies of people getting gastroparesis or a slowing or paralysis of the gastric stomach.

when we when we talk about what is gastroparesis, it's paralyzing of the gastric muscle so it doesn't drain as well. And people are stuck with these, like, food boluses.

They're bloated. It's painful, you know, for days. What happens is this is a natural consequence to have, diabetes type 1 and type 2. So that could happen because it's affecting the nerve cells there.

Just kind of like how diabetics have, you know, problems with nerve damage in their feet. It could happen in the stomach too. So, you know, a lot of these cases of people getting the gastroparesis, I think it's probably because it's, you know, these GLP-1s are being used improperly or it's someone that already had underlying disease with that.

So in addition, the GLP-1s can have beneficial effects on cardiovascular health and weight management. And this is because patients are losing the weight and they're reducing some of those parameters.

So what is GIP So GIP is Glucose-dependent insulinotropic peptide And this is an endocrine hormone that's secreted by the intestine in response to food intake.

And this is secreted by the key cells in the intestine. And particularly fat is more responsive to this food intake. And it stimulates insulin secretion from the pancreatic beta cells.

So similar to the GLP-1s. And this promotes glucose uptake by the cells and lowering the blood sugar levels. And GIP secretion is also glucose dependent meaning.

And it enhances insulin release when the the blood glucose is high.

GIP and Tirzepatide Overview

So in addition to its role in insulin secretion, GIP also contributes to lipid metabolism and energy storage. This is

tirzepatide and the brand names are Mounjaro and Zepbound, and this is also administered with a subcutaneous injection.

So that's tirzepatide it is a GLP-1 plus GIP. So it has those two mechanisms. And I have found that people tend to get more fat loss from the, you know, the Mounjaro tirzepatide and the new Zepbound but also a little bit more side effects, moreso I'm seeing like dizziness, which is very interesting with this one.

So there are contraindications to these. And this is if there's a personal or family history, medullary thyroid cancer or anything with men two or multiple under skin neoplasm syndrome.

So in rats tirzepatide cause thyroid C tells T cell tumors. But it isn't yet known as this drug possesses any risk for the increase of C cell tumors in human.

So with the GLP-1 and the GLP-1 GIP drugs there, that is contraindication with that family history of those two cancers. But we have not seen any concern of these causing cancer in humans.

Or they did some primate studies to relative contraindications, meaning like, you know, we should be cautious.

Contraindications and Safety Concerns

There's a history of pancreatitis, gastroparesis, also some negative side effects or pancreatitis, which is inflammation, inflammation of the pancreas, gastroparesis, which we spoke about suicidal ideations, Gerd or gastric esophageal reflux disorder and the return of the weight and also some other side effects noted, you know, in the packaging on these drugs, difficulty in breathing or swallowing, fast heartbeat, gastric stomach pain, heartburn, recurrent fever, skin itching, rash, redness, stomach fullness, swelling of the face, throat or tongue So when we look at these medications, it's just like any other peptide for me.

I you know, it's a good idea to cycle them. The other thing that we want to be sure that we do is make sure we're using them appropriately, make sure we're using them in patients that have already, you know, balance their gut, fix their sleep, have their stress under control.

And then these are the two big things for me. I tell my patients, you have to be eating adequate protein and you have to be lifting weights. Why? Because we have seen with these and in the studies that patients are not just losing fat, they're losing muscle too, you know, and this is where we don't want to lose muscle.

Because remember muscle is is long is a longevity organ. It's so good for us. And we lose muscle as we age. It's called sarcopenia. So we're losing muscle as we age.

And we're on a drug where we lose more muscle. That is not good. You know, that could increase the risk of falls. you know, you need to have that muscle strength.

So I actually have protocols for patients, a six week protocol for them to go to, a weight loss protocol to prep their body for going on one of these GLP-1s.

And my patients, they don't gain the weight back. Right. So what we're seeing with these studies is that not only are patients gaining the weight back, they're also going back to their baseline hypertension problems or hyperlipidemia problems.

So what does that mean. They're not changing their eating habits. So they're losing weight but they're still eating you know fast food every day. So yes the cravings aren't going to be as much.

You're not going to crave that food and you're not going to go out of your way. But if you're still having the same habits, you might go back to those after.

Then you'll gain the weight back. And we don't want people to be on this long term for weight loss or longevity, you

know?

Muscle Loss, Lifestyle, and Weight Regain

But it does do a lot of really cool things. so let's go through some studies. I said for weight regain and cardiometabolic effects after withdrawing. semaglutide there was a step one trial extension. And, this study had one year after the withdrawal of a once a week subcutaneous semaglutide, the 2.4mg, and they had lifestyle intervention.

Patients regain two thirds of their prior weight, with similar changes in cardio metabolic variables. So the findings confirm that the current that they think the these patients need to be on this chronically to maintain improvements in weights and health.

Now they're saying that they had some cell intervention. But I wonder what it really was. You know, where they eating proper protein 30g per meal. Were they lifting weights.

so another study on the clinical effectiveness of semaglutide on weight loss, body composition and muscle strength in Chinese adults. this study was of 53 of these patients.

They received 24 weeks of lifestyle interventions plus semaglutide treatment. And the conclusion was in real world setting, semaglutide can reduce the weight and fat of obese patients while effectively maintaining muscle mass and muscle strength.

So which I love in this study is that they put them on a proper lifestyle portion. So they had them working out and working to retain that muscle, right?

Because if we're not using it, we're going to lose it, especially if you're not providing adequate protein and calories. The surmount for a randomized clinical trial, these participants, there is 783.

And this was once weekly subcutaneous, injection of tirzepatide. Yes. because I was 10 or 15mg for 36 weeks. Okay. Now some were continuing to see the appetite or some were switched to placebo at week 36.

And the conclusion was after achieving clinically meaningful weight reduction during the 36 week tirzepatide it had lead in treatment period.

Research on Semaglutide and Tirzepatide

Adults with obesity or overweight who continued the treatment of the maximum dose for an additional 52 weeks, demonstrated superior weight management and continue weight reduction compared with those who switched to placebo So a lot of these studies, they're just trying to be like, hey, you have to be on this chronically.

But but I think that if you're just using it for weight loss, you need to take breaks. You need to give habits, okay? You need to use this smartly so you don't have those side effects.

and in another study, the step for randomized clinical trial was with semaglutide. But it was similar results. So I think these studies are really interesting to look at because we we want to what we talked about during the summit and what you guys will listen to as you listen to the other lectures and doctors and, and clinicians, is that we need to before we dive into peptides, we need to get our four pillars good.

We need to get our sleep, our diet or exercise. You know, our breathwork or meditation. We need to get all of that together. so let's talk about dosing.

So dosing for semaglutide. you know, when it's compounded it's a little bit easier to titrate. And it's really nice for patients because a lot of them are different.

Some are really sensitive to the nausea. So we want them to go slower. Some some are not. And they they ramp up pretty fast. So commercially available Ozempic.

And wegovy come in.5 and one milligrams and two milligrams and wegovy he goes all the way up to 2.4mg compounded. It's usually 5mg/ml. And you could titrate up slowly each week with a maximum of two milligrams.

I don't have people on more than two milligrams, Mounjaro and zepbound.

Dosing and Peptide Combinations

So that's the tirzepatide That is the GLP-1 GIP So those are the similar dosing. So they start at 2.5mg and then five, 7.5 ten 12.5 and 15mg compounded we we start 2.5mg with them max out at about ten.

other peptides used in conjunction with GLP. I love CJC 1295 if a more ipamorelin tesamorelin because those are growth hormones secretagogue So they are remember they're substances that stimulate the secretion of our growth hormone from the pituitary gland.

And they work by binding those specific receptors in the pituitary gland triggering that release of growth hormone into the bloodstream. So not growth hormone or hormone does not giving growth hormone but actually supporting your body is secrete that growth hormone which does decline as we age.

And why growth hormone. Why is this a good fit? Because you know muscle all the I can't say the measure but muscle right. So growth hormone in muscle.

So that's why this is such a good pair with the GLP-1s and GLP-1 GIPs Because you are supporting that muscle growth. You know, they're taking five days out of 7 A growth hormone secretagogue along with their semaglutide nurtures appetite.

And so they're really, you know, working on all the facets to just to just be healthy and create a lean body and lean muscle mass. So so that's my thoughts.

You know, on you can do it right. Or you could do it wrong. And there's a lot of wrong going on right now. But it shouldn't be all or nothing. And I really get triggered when people say that semaglutide is horrible.

it has done amazing things with patients that had needed that to move the needle. And now, you know, they're doing so much better. So you just have to work with someone that knows how to use these peptides properly and the right way.

So thank you for listening to the mini talk. See you soon.