Annals of Pharmacology and Pharmaceutics

Case Study
Published: 24 Jul, 2024

Tirzepatide Causes Sexual Dysfunction in Women

Sattar SR and Sattar SP*

Department of Psychiatry and Addiction Medicine, Inroads to Recovery, USA

Introduction

Tirzepatide is Glucose-Dependent Insulinotropic Polypeptide (GIP) receptor And Glucagon-like Peptide-1 (GLP-1) receptor agonist that mimics the GLP-1 hormone released in the gastrointestinal tract after eating. GLP-1 prompts the body to produce more insulin, which lowers blood glucose levels [1]. Tirzepatide has been evaluated as a treatment for type 2 diabetes, and reduce A1C levels and has been increasingly used to help with weight loss and obesity management [2,3].

While several side effects have been reported, abdominal pain and GI related side effects are more common [1]. But there are no published reports of Tirzepatide induced sexual dysfunction in a woman.

Case Study

A 37-years-old female presented with concerns about her weight and risk of developing Type I diabetes due to a strong family history. At 5'4" tall and 165 lbs, her BMI was 28.3. She reported no other underlying medical conditions and only took loratadine for seasonal allergies. Initially, a healthy lifestyle with increased physical activity and exercise were advised. Three months later, her weight and BMI increased further. Naltrexone 50 mg/day was started for weight reduction, but after three more months, her weight and BMI increased further. After a risk-benefit assessment, Tirzepatide was started at 2.5 mg/week, while naltrexone was continued. After 4 weeks, dose increased to 5 mg/week, and 4 further weeks later, increased again to 7.5 mg/week. Her weight started decreasing by about 5 lbs/month. Tirzepatide was well tolerated except for a notable decrease in desire for sexual activity. After underlying medical, psychological and hormonal causes were excluded, naltrexone was discontinued. Four weeks later, the sexual dysfunction symptoms remained. Now, the Tirzepatide was stopped as well. Four weeks later, the sexual dysfunction symptoms disappeared. Since her weight started increasing again, Tirzepatide was restarted, and gradually increased to 7.5 mg/week. The symptoms of sexual dysfunction returned 4 week later.

Tirzepatide and other GLP-1 receptor agonists mimic the action of Glucagon-Like Peptide-1 (GLP-1) to stimulate insulin secretion and reduce glucose production. While other GLP-1 receptor agonists like Semaglutide have been linked to female sexual dysfunction [4], this has not been reported with Tirzepatide before.

While the exact mechanism of this dysfunction is not yet fully understood, it is believed that the drug's effect on hormones and neural pathways could play a role in reducing sexual desire.

While further research is needed to establish this link, the onset of sexual dysfunction with starting Tirzepatide, discontinuation of the dysfunction with elimination of the Tirzepatide, and the resumption of these side effects with the rechallenge with the Tirzepatide suggests a link.

References

1. Fanshier AV, Crews BK, Garrett MC, Johnson JL. Tirzepatide: A novel glucose-dependent insulinotropic polypeptide/glucagon-like peptide 1 receptor agonist for the treatment of type 2 diabetes: The first Twincretin. Clin Diabetes. 2023;41(3):367-77.
2. Geisler CE, Antonellis MP, Trumbauer W, Martin JA, Coskun T, Samms RJ, et al. Tirzepatide suppresses palatable food intake by selectively reducing preference for fat in rodents. Diabetes Obes Metab. 2023;25(1):56-67.
3. Jastreboff AM, Aronne LJ, Ahmad NN, Wharton S, Connery L, Alves B, et al. Tirzepatide once weekly for the treatment of obesity. N Engl J Med. 2022;387(3):205-16.
4. Chavda VP, Ajabiya J, Teli D, Bojarska J, Apostolopoulos V. Tirzepatide, a new era of dual-targeted treatment for diabetes and obesity: A mini-review. Molecules. 2022;27(13):4315.

OPEN ACCESS

Correspondence:
Syed Rayaan Sattar, Department of Psychiatry and Addiction Medicine, Inroads to Recovery, 2808 N 75th St, Omaha, NE 68134, USA, Tel: +1-5317219774;

Received Date: *01 Jul 2024*
Accepted Date: *18 Jul 2024*
Published Date: *24 Jul 2024*

Citation:
Sattar SR, Sattar SP. Tirzepatide Causes Sexual Dysfunction in Women. Ann Pharmacol Pharm. 2024; 9(1): 1212.