Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Sadia et al - 2026

DOI: http://doi.org/10.5281/zenodo.19909519

THE UNSEEN COST OF WEIGHT LOSS: PREVENTING VISION LOSS IN THE GLP-1 ERA

***Halima Sadia**
Faculty of Pharmacy Jinnah University for Women Karachi, Pakistan.
Dania Naveed
Faculty of Pharmacy and Pharmaceutical Sciences, University of Karachi,75270, Pakistan
Umama Noor Siddiqui
Liaquat College of Medicine and Dentistry (LCMD), Karachi, Pakistan

Author Details

Keywords:
GLP-1, Non-Arteritic Anterior Ischemic Optic Neuropathy, Ocular health

Received on 24 Feb 2026
Accepted on 04 Apr 2026
Published on 22 Apr 2026

Corresponding E-mails & Authors*:
Halima Sadia

Abstract

Glucagon-like peptide-1 (GLP-1) receptor agonists, especially Semaglutide, are globally used to treat Type 2 Diabetes Mellitus because they offer important metabolic and cardiovascular benefits. Recent studies suggest a link between these drugs and Non-Arteritic Anterior Ischemic Optic Neuropathy, which can cause permanent vision loss. The rapid changes in metabolism and blood flow induced by GLP-1 receptor agonists might reduce blood supply to the optic nerve, especially in people with risk factors such as a crowded optic disc. The risk appears to be greatest at the initial phase of treatment; yet, routine eye examinations and screening are not currently advised by the prescribers. As the global use of GLP-1 receptor agonists increases, even infrequent adverse effects may become a public health concern. This underscores the necessity of preventive measures, including assessing ocular health before initiating treatment and providing patients with enhanced information, to ensure the safe and effective use of these medications.

Vol. 5 No. 2 (2026)

Pakistan Journal of Medical & Cardiological Review

https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387

Print ISSN 3007-2379

Sadia et al - 2026

DOI: http://doi.org/10.5281/zenodo.19909519

INTRODUCTION

Over the recent years, new strategies for the management of diabetes have gained increased momentum. Specifically, Glucagon Like Peptide 1 receptor agonists e.g. semaglutide have revolutionized the pharmacotherapeutic management of diabetes. Not only diabetes, these drugs are also employed to tackle obesity. Regardless of the remarkable therapeutic benefits, a serious ocular adverse effect, Non-arteritic Anterior Ischemic Optic Neuropathy (NAION), is linked to these drugs. The ocular adverse effect can cause irreversible blindness due to eye damage.[1] [2] This is a significant public health concern and needs urgent attention of health care workers prescribing these medications. It is very interesting to know how these drugs how these drugs could led to NAION.[3] Significant reduction in weight and steady blood sugar levels can alter the flow of blood and consumption of food for energy in the body. [4] For those with pre-existing susceptibility, such rapid blood pressure variations can lead to diminished blood flow to the optic nerve. As the optic nerve is very sensitive to the alterations in the blood pressure, this eventually can predispose into NAION. [5] In addition, the risk is greatest when an individual begins treatment, hence, routine eye screening is highly recommended during this period. [6] Secondly, because of an optic disc defect, some individuals are more likely to get the NAION. [7] One of the main, unalterable risk factors is having a 'crowded' optic disc which can be easily diagnosed with a simple eye exam or an optical coherence tomography scan. Failure to detect this condition prior to initiating a long-term treatment for a chronic illness constitutes a significant oversight in preventive measures. [8] Early diagnosis can prevent irreversible damage and therefore, lower harm to the patients. Last but not the least, when considering the large population likely to utilize these drugs, which could number in the tens of millions, the probability of a rare but severe adverse event increases. Currently, the sole mechanism through which individuals are informed of vision impairment is through self-awareness or self-reporting, which is insufficient. This problem gets worse because the prescribing of these drugs has increased significantly with the growing demand, and this has led to more 'casual' prescribing without considering the risks it conferred. [9]

Pakistan Journal of Medical & Cardiological Review
https://pakjmcr.com/index.php/1/about

Online ISSN 3007-2387
Print ISSN 3007-2379

Sadia et al - 2026
DOI: http://doi.org/10.5281/zenodo.19909519

As they say "prevention is better than cure". There is a dire need to establish protocols advising the assessment of optic disc morphology prior to initiating GLP-1 therapy. Pharmacists also play an important role here by counseling patients about their medications and advising them on any eye-related symptoms they may experience. [10] [11] The safe use of medicines is the responsibility of all healthcare professionals. These drugs offer significant benefits, particularly for vulnerable diabetic and obese populations; however, this should not come at the cost of vision loss. Therefore, eye examinations should be included as part of routine care when initiating such medications. Treating one condition should not lead to the development of another.

Corresponding Author: danianaveed.official@gmail.com, halimasadia093@gmail.com

REFERENCES

1. Ramsey, D.J., et al., *GLP-1 receptor agonists and sight-threatening ophthalmic complications in patients with type 2 diabetes.* JAMA Network Open, 2025. **8**(8): p. e2526321.
2. Oliver, J., *The GLP-1 Illusion: Weight Loss Without Metabolic Health.* Authorea Preprints, 2025.
3. Wennberg, D., et al., *The Real-World Costs of GLP-1 Receptor Agonist Treatment.* medRxiv, 2025: p. 2025.10. 24.25338255.
4. Abdelrahman, R.M., et al., *Harnessing GLP-1 Receptor Agonists for Obesity Treatment: Prospects and Obstacles on the Horizon.* Journal of Obesity, 2025. **2025**(1): p. 9919810.
5. This, W.M.C.W.M., *Hard-Hitting Insights on the War on Obesity and the Food Industrial Complex.*
6. Chavda, V.P., et al., *Unlocking longevity with GLP-1: A key to turn back the clock?* Maturitas, 2024. **186**: p. 108028.
7. Jones, L.A. and D.I. Brierley, *GLP-1 and the neurobiology of eating control: recent advances.* Endocrinology, 2025. **166**(2): p. bqae167.
8. Xia, W., *Light on the Scale, Heavy on the Problems: How Telehealth's Accessible Weight Loss Solution Has Compounded Its Risks.* Seton Hall L. Rev., 2025. **56**: p. 983.
9. McPake, B., *Overweight, obesity and diabetes: global trends and a better future?* Health Systems & Reform, 2025. **11**(1): p. 2518797.
10. Moroder, M.C., *Weight Loss Injections for Animals: Opportunities, risks, and research surrounding GLP-1 in veterinary medicine.* 2025: BoD–Books on Demand.
11. Imam, A., et al., *Weight loss effect of GLP-1 RAs with endoscopic bariatric therapy and bariatric surgeries.* Journal of the Endocrine Society, 2023. **7**(12): p. bvad129.