ISSN: 2754-4931

Journal of Gastroenterology & Hepatology Reports

SCIENTIFIC Research and Community

Editorial

Open Access

Diabetic Gastroparesis: Please Help Me?

Hazim Abdul-Rahman Alhiti

General surgeon Specialist, Fellow of Iraqi Council of Medical Specialization (General surgery), Head of Emergency Department- Higher Institute of Health (Al-Anbar), Al –Ramadi Teaching Hospital, Iraq

***Corresponding author**
Hazim Abdul-Rahman Alhiti, General Surgeon Specialist, Fellow of Iraqi Council of Medical Specialization (General surgery), Head of Emergency Department- Higher Institute of Health (Al-Anbar), Al –Ramadi Teaching Hospital, Iraq. Ph: 009647821490455; E-mail: Hazim.alhiti@uoanbar.edu.iq; hazim4436@gmail.com

Received: November 17, 2021; **Accepted:** November 23, 2021; **Published:** November 29, 2021

Introduction

Gastropathy means any disorder of the stomach, particularly the gastric mucosa. Gastroparesis means chronic and delayed stomach emptying despite no mechanical obstruction. Subsequently, gastroparesis strikes 75,000 persons out of 45 million persons, so the estimated prevalence is 0.16 %. Further, gastroparesis attacks 30 percent of type 2 diabetics, plus 40 percent of type 1 diabetic patients. Furthermore, the ten-year merged incidence is 5 percent in type 1 diabetics and 1 percent in type 2 diabetics [1]. Diabetic gastropathy is a condition that covers various neuromuscular dysfunctions of gastric tone, contractility, or myo-electrical movements in diabetic patients. Accordingly, these dysfunctions range from antral hypo-motility, irritable gastric motility to gastroparesis [2]. The causes of gastroparesis are idiopathic in 35 percent, 35 percent caused by diabetes, post-surgical causes in 12 %, Parkinson's disease-related in 9 %, and collagen diseases in 9 percent. The prolonged duration of uncontrolled hyperglycemia induces generalized neuro- vascular damage everywhere in the body by interfering with neural nutrition and oxygen supply. Furthermore, this progressive damage attacks the vagus nerve driving to gastroparesis. Another cause is the defect of gastric Cajal cells through damaged Nitric Oxide mechanism in the conduction of diabetic neuropathic pain. Moreover, during surgery of the stomach, or duodenum the excessive dissection nearby the vagus nerve may cause vagal injury. Accordingly, numerous neuronal disorders like scleroderma, Parkinson's disease, multiple sclerosis, autoimmune diseases, hypothyroidism, some drugs, and viral infections may induce gastropathy [3]. The patients who have diabetic gastropathy suffer from one or more of these vague symptoms like intermittent nausea, postprandial discomfort, early satiety, epigastric pain, bloating, acid reflux, and sometimes vomiting. Moreover, these disturbing complaints may be very severe according to the longevity and severity of the vagus nerve damage. Besides, these symptoms may aggravate at any time, especially after eating fatty foods [4].

Argument

For diabetic Gastroparesis, are there any treatment updates?
Classification of severity of diabetic gastropathy [5].

1. **Grade 1:** Mild gastroparesis occurs in early cases and responded to simple measures
2. **Grade 2:** Compensated gastroparesis that not relived by dietary modification or lifestyle changes, but can be relieved by prescribed drugs
3. **Grade 3:** Severe gastroparesis that not relieved by drugs

Treatment options include: [6]

1. Control of blood sugar by adjustment of insulin dose, timing, or change of type.
2. Dietary modification

- Stopping alcohol, smoke, and energy drinks
- Eating regular, scantier eats every day
- Eating well-cooked vegetable
- Eating low-fatty diet
- Chewing gum

3. Lifestyle changes

- weight reduction
- walking on fresh air
- minimize sedentary style
- physical, social communication
- simple gym sports
- cycling and swimming
- stop smoking and alcohol

4. Drugs for mild-moderate cases

- Metoclopramide is the drug licensed by the Food and Drug Administration for cases of diabetic gastroparesis.
- Nasal spray of Metoclopramide in acute and chronic type
- Some physicians prescribed IV immunoglobulin in refractory cases as an autoimmune dysmotility.
- Domperidone lessens gastroparesis and stimulates gastric emptying.
- Motilin receptor agonists like erythromycin, azithromycin and clarithromycin
- Cisapride is a potent accelerator of gastric emptying.
- Bethanecol can augment gastric emptying as a muscarinic receptor agonist.
- Tegaserod boosts gastric emptying; but, it has withdrawn from the pharmacies.
- Some doctors prescribed antiemetic medications alone or with prokinetic remedies in diabetic gastroparesis.
- Antihistamines produce gastric emptying.

- Several doctors prescribe Motilin agonists as a treatment for gastroparesis.
- Some therapists write Ghrelin agonists as a remedy for gastroparesis.
- Several doctors advice Relamorelin as a therapy for gastroparesis.
- Some physicians prescribe sildenafil as a remedy for gastroparesis.
- Several doctors write Pistacia atlantica kurdica gum.
- Neurokinin1 antagonists like Aprepitant and fosaprepitant manage vomiting linked to chemotherapy.
- Some physicians recommend the fundus relaxing drug buspirone
- some doctors utilize the newest prokinetic agent acotiamide
- Antihistamines (H1) receptors: diphenhydramine
- a newer prokinetic serotonergic medication velusetrag
- some doctors advised prucalopride
- the anti-emetic remedy aprepitant
- Nitrates as a anti emesis
- some physicians advised the extract of hawthorn seeds as a good motility agent
- Salsola collina extract give good results
- Chinese herb Pair Huanglian-Banxia
- traditional Chinese antiemetic: Ginger
- Intravenous immunoglobulin in refractory cases

5. Endoscopic treatment: there are novel endoscopic techniques in patients not responded to the above drugs in moderate-severe cases

- per-endoscopic pyloric myotomy
- Intrapyloric Botulinum Injection
- endoscopic transpyloric self-expandable stent plus fixation
- Endoscopic intrapyloric botulinum injection in refractory cases
- percutaneous endoscopic jejunostomy
- endoscopic Gastrostomy tube placement
- endoscopic Jejunostomy tube placement
- endoscopic gastric Electrical Stimulation

6. Surgical treatment: either palliative or radical treatment in severe cases

- Palliative operations include
- gastric pacemaker had moderate correction of gastric emptying
- tube gastrostomy plus jejunostomy
- gastrostomy
- jejunostomy
- gastric stimulation
- Radical operations include:
- subtotal gastrectomy
- total gastrectomy
- pancreatic transplantation

7.Psychological therapy

- psychological reassurance
- Acupressure or electrical acustimulation
- anti- psychotic drugs
- Dopamine antagonists: Itopride had anti-acetylcholinesterase actions
- dopamine blocker: Sulpiride for psychiatric disorders
- 5-HT4 receptor agonist: Mosapride
- 5-HT4 receptor agonist and 5-HT3-receptor antagonist: Renzapride
- Physiostigmine and neostigmine are muscarinic receptor agonists
- H2-receptor antagonist: Nizatidine
- Cholecystokinin receptor antagonists: like dexloxiglumide or loxiglumide
- Phosphodiesterase 5 inhibitor: Sildenafil
- Phenothiazines: is an antiemetic remedy like prochlorperazine
- Serotonin 5-HT3 receptor antagonist: ondansetron
- tricyclic antidepressants: Tricyclic antidepressants in low doses
- Cannabinoid drugs: dronabinol
- Some doctors prescribe Benzodiazepines as an anti-emetics
- Neurokinin NK1-receptor antagonists: like Aprepitant or casopitant
- Some doctors advise corticosteriod as an anti-emetics
- Buspirone to relieve anxious patients
- Sumitriptan to manipulate migraines
- selective serotonin reuptake inhibitors: Paroxetine

Conclusion

There are many modalities to help a patient who has diabetic Gastroparesis.

References

1. Young CF, Marianne Moussa, Jay H Shubroo (2020) Diabetic Gastroparesis: A Review. Diab Spect. 33: 290-297.
2. Kalra S, Amit Sharma, Gagan Priya (2018) Diabetic Gastroparesis. Diabetes Ther 9: 1723-1728.
3. Usai-Satta P, Massimo Bellini, Olivia Morelli, Francesca Geri, Mariantonia Lai et al. (2020) Gastroparesis: New insights into an old disease. World J Gastroenterol. 26: 2333-2348.
4. Avalos DJ, Sarosiek I, Loganathan P, McCallum RW (2018) Diabetic gastroparesis: current challenges and future prospects. Clin Exp Gastroenterol. 11: 347-363.
5. Waseem S, Baharak Moshiree, Peter V Draganov, (2009) Gastroparesis: Current diagnostic challenges and management considerations. World J Gastroenterol. 15: 25-37.
6. Myint AS, Brandon Rieders, Mohammed Tashkandi, Marie L Borum, Joyce M Koh et al. (2018) Current and Emerging Therapeutic Options for Gastroparesis. Gastroenterol Hepatol. 14: 639-645.