OPEN ACCESS
Freely Available Online

JOURNAL OF RADIATION AND NUCLEAR MEDICINE
ISSN NO: 2766-8630

Letter

DOI: 10.14302/issn.2766-8630.jrnm-20-3679

# The factors for Limited use of Gastric Emptying Scintigraphy in the Management of Diabetic Gastroparesis

Sanchay Jain[1], Vandana K Dhingra[1,*]

[1]Department of Nuclear Medicine AIIMS Rishikesh , India

**Sir,**

Diabetes Mellitus is one of the most common non communicable diseases, with rising incidence and prevalence. Several systemic complications like retinopathy are known to arise in long standing diabetes, gastroparesis is one such complication, and adds to morbidity of these patients. Early diagnosis of gastroparesis may be valuable in prompt management and thereby improving patient outcome. Various methods have been devised for diagnosis of gastroparesis but Gastric Emptying Scintigraphy (GES) stands out as the test of choice as it is physiological study which quantifies the gastric retention and can also be used for follow up of these patients after initiating treatment. Careful consideration of meal used, and adherence to standardized procedure minimizes the errors in the results and increases validity of the study. Several studies have been performed utilizing GES have helped in evaluating role of various disease related factors in diabetic gastroparesis Table 1. [1-4]. However larger multicentric studies will help in further standardizing the procedure especially with regards to the meal used in GES which is one of the main limitation restrictive to the popularity of this modality. Availability and inhibition due to radiation are other important factors restricting its use. We recommend utilization of this modality with more fervor for better patient management in symptomatic diabetics.

**Corresponding author:** Vandana K Dhingra, Department of Nuclear Medicine AIIMS Rishikesh, India, Email: modisbanu@yahoo.com, vandana.numed@aiimsrishikesh.edu.in

**Received:** Dec 26, 2020 **Accepted:** Feb 15, 2021 **Published:** Feb 18, 2021

**Editor:** Qiuqin Tang, Obstetrics and Gynecology Hospital Affiliated to Nanjing Medical University, China.

Table 1. Major Hospital based studies and their key findings utilizing GES in Diabetics

| Study | Participants | Key findings |
|---|---|---|
| Izzy M *et al.*2017 [1] | 299 patients of Type 1 and Type 2 DM | Poor glycemic control is associated with delayed gastric emptying.<br>No significant association of age, gender, or type of DM with 4h gastric retention values. |
| Anudeep V *et al.* 2012 [2] | 140 patients of Type 2 DM | HbA1c and BMI are independent predictors of delayed GE.<br>Presence and severity of symptoms of gastroparesis do not predict delayed GE.<br>Delayed GE associated with increased risk of hypoglycemic episodes. |
| Bharucha *et al.*2008 [3] | 129 patients of Type 1 and Type 2 DM | Significant weight loss and neuropathy are risk factors for delayed and rapid GE respectively.<br>Type and duration of DM, HbA1c, extraintestinal complications not associated with delayed or rapid GE. |
| Chedid *et al.*2019 [4] | 108 patients of Type 1 and Type 2 DM | Testing for gastric emptying and gastric accommodation aids in targeted individualized treatment. |

## References

1. Izzy M, Lee M, Johns-Keating K, Kargoli F, Beckoff S, Chun K, et al. Glycosylated hemoglobin level may predict the severity of gastroparesis in diabetic patients. Diabetes Res Clin Pract. 2018;
2. Anudeep V, Vinod KV, Pandit N, Sharma VK, Dhanapathi H, Dutta TK, et al. Prevalence and predictors of delayed gastric emptying among Indian patients with long-standing type 2 diabetes mellitus. Indian J Gastroenterol. 2016
3. Bharucha AE, Camilleri M, Forstrom LA, Zinsmeister AR. Relationship between clinical features and gastric emptying disturbances in diabetes mellitus. Clin Endocrinol (Oxf). 2009;
4. Chedid V, Brandler J, Vijayvargiya P, Park SY, Szarka LA, Camilleri M. Characterization of Upper Gastrointestinal Symptoms, Gastric Motor Functions, and Associations in Patients with Diabetes at a Referral Center. Am J Gastroenterol. 2019;