

## Changes of electrogastrogram in diabetes mellitus

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Author contributions: All authors contributed equally to the work.

Original title: *China National Journal of New Gastroenterology* (1995-1997) renamed *World Journal of Gastroenterology* (1998-).

Received: December 11, 1995

Revised: February 26, 1996

Accepted: August 1, 1996

Published online: September 15, 1996

### Abstract

**AIM:** Gastrointestinal motility disturbances occur frequently in patients with diabetes mellitus (DM). Our study investigated the change of electrogastrogram (EEG) in DM patients, in order to study the gastric motility and its relation to upper gastrointestinal symptoms.

**METHODS:** Type 2 diabetic patients without hepatic, gallbladder, pancreatic and upper gastrointestinal diseases were selected randomly from in patients in endocrinology department. EEG was performed on patients fasted overnight (> 10 h) before and 2 h after breakfast.

**RESULTS:** (1) Patients with symptoms showed their Fp levels lower

than normal range ( $P < 0.01$ ). Fp levels showed no differences ( $P > 0.05$ ) between pre and post prandial status. Ap levels were within the normal range. There existed differences of Ap and Fp levels between bulbitis duodena and corpus ventriculi ( $P < 0.05$ ). (2) Patients without symptoms showed low pre prandial Fp levels. Post prandial Fp levels were significantly higher ( $P < 0.05$ ) than pre prandial ones. Ap levels were within the normal range. (3) With regard to the Fp abnormality rates in bulbitis duodena, there existed differences ( $< 0.05$ ) between patients with and without symptoms. And (4) The percentage of patients with duration of diabetes more than 10 years was higher ( $P < 0.05$ ) in symptom group (55.54%) than that in non symptom group (29.0%).

**CONCLUSION:** EEG abnormalities, as bradygastria and stomach duodenal motility disorders, were common in type 2 diabetes, and was in correspondence with gastroparesis symptoms. To pay attention to the non symptom patients' gastric motor abnormalities, and to treat it as early as possible will be of benefit to the control of diabetes mellitus.

**Key words:** Electrogastrogram; Diabetes mellitus

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Wang GS, Liu ZJ, Zhang L, Lin HZ. Changes of electrogastrogram in diabetes mellitus. *World J Gastroenterol* 1996; 2(Suppl1): 102 Available from: URL: <http://www.wjgnet.com/1007-9327/full/v2/iSuppl1/102.htm> DOI: <http://dx.doi.org/10.3748/wjg.v2.iSuppl1.102>

E- Editor: Liu WX



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