Introduction: The gastric emptying rate has a decisive role in the regulation of carbohydrate metabolism in diabetic patients.

Objective: Here we describe the clinical case of autonomic dysfunction and the associated motility disorder leading to hypoglycemia. A 32 years old man was admitted to the endocrinology department with severe recurrent convulsions and transient unconsciousness. His diabetes developed 20 years before when the ill of epidemic parotitis. Although he did not have digestive symptoms, the 13C-octanoic breath test (13C-OBT) gastric emptying was done. The half-time of gastric emptying (HTE) was extremely long (HTE: 318.2 min, normal range: 40-75 min.). The all functional tests reflected a severe stage of gastroparesis, with a dominance of parasympathetic dysfunction. The glucose in the blood during four time per day was measured on consecutive week. On all of this time the postprandial glucose was much lower than the fasting value and on 2 of the 6 days it fell down to the hypoglycemic range. Parenteral, later oral metoclopramide, alpha lipoic acid and benfotiamine were administered. The insulin treatment and the diet were also adjusted. 3 months later the patient was symptom-free of hypoglycemia, the HTE was less longer (246.4 min.), did not reveal post-breakfast glucose lowering while the diabetic gastroparesis remained severe.

Conclusions: The measurement of the gastric emptying might (13C-OBT) be a part of the differential diagnostics of newly appearing severe hypoglycemia in diabetic patients with chronic complications of disease. The pathogenic and symptomatic treatment of diabetic gastroparesis and neuropathy results a stable glucose metabolism, an improvement in quality of life.