Dear Editor,

Hypoglycemia that results from an absolute or relative decline in blood sugar is a clinical condition with various manifestations and mortality rate up to 11-27% [1]. Rasagiline is a second generation irreversible monoamine oxidase B (MAO-B) inhibitor which is indicated for the treatment of Parkinson’s disease [2]. We aimed to present a patient with Parkinson’s disease who developed hypoglycemia due to rasagiline use. The case is unique in the literature, because she had no concomitant diseases or medication usage.

A 42-year-old female patient presented to the outpatient clinic with the complaints of dizziness, weakness, fatigue, nervousness, tension, cold sweating, and hunger sensation over the past year. She was having the diagnosis of Parkinson’s disease for years and was using rasagiline 0.5 mg/day. The patient was alert, oriented, and cooperative. On physical examination, the skin was cold and moist. Rhythmic heartbeats and tachycardia (105/minute) were observed. Laboratory tests revealed the followings: WBC: 4600/mL, hemoglobin: 11.8 g/dL, hematocrit: 35.2%, platelet: 342x10^6/mL, mean corpuscular volume: 79 fL, urea: 79 mg/dL, glucose: 55 mg/dL (measurement was repeated two times, the results were in accordance with the previous ones), calcium: 8.8 mg/dL, creatinine: 0.6 mg/dL, potassium: 4.6 mmol/L, sodium: 135 mmol/dL, total protein: 7.6 g/mL, cortisol: 12.02 mcg/dL, ferritin: 24 mg/dL, free T4: 1.04 ng/dL, thyroid-stimulating hormone: 0.696 mIU/l, 25-hydroxy vitamin D: 21.4 ng/mL, insulin-like growth factor-1: 102 ng/mL, insulin: <2 mIU/mL, C-peptide: 0.583 ng/mL, and growth hormone: 0.741 ng/mL. The patient had mild iron-deficiency anemia. According to the examination and laboratory and imaging studies, any pathology other than hypoglycemia due to rasagiline medication for Parkinson’s disease was not detected. The symptoms related to hypoglycemia were not detected after discontinuation of rasagiline. Parkinsonism treatment was organized by the department of neurology. A diet program was created. During outpatient follow-up, we did not detect any sign and symptom of hypoglycemia for two months, thus, follow-up for hypoglycemia was terminated.

Rasagiline is a selective MAO-B inhibitor. It is used in Parkinson’s disease either as monotherapy or in combination with levodopa. Rasagiline treatment may come with some adverse effects, such as gastrointestinal symptoms, hypotension, sleep disorders, headache, anxiety, and edema. There have been post-marketing information obtained, the use range in the about 166.000 Parkinson’s disease patients with estimated 399.120 patient/year usage across the world a serious adverse effect did not reported until the date 2010 [3]. However, accompanying possible hypoglycemic effects of selegiline, which is also a selective MAO-B inhibitor, have been reported in animal and human studies [4]. According to Food and Drug Administration reports of the adverse effects related to rasagiline therapy, until December 2013, only two out of 1.380 patients have been reported to have hypoglycemia due to rasagiline use. These two patients were over the age of 60, the both patients had systemic diseases other than Parkinson’s disease such as type 2 diabetes mellitus, hypertension, and rheumatoid arthritis [5]. As these features were present in both patients, rasagiline was not the possible cause of hypoglycemia. Our patient did not have any accompanying systemic disease and drug use; symptoms and signs of hypoglycemia improved after cessation of rasagiline therapy. Any other possible cause of hypoglycemia was not detected. When all these facts were considered, rasagiline was found to be the sole factor inducing hypoglycemia in our patient. This case is unique in the literature.

Nurhan Bilen, Ayşe Çarlıoğlu*, Yusuf Bilen**
Atatürk University Faculty of Medicine, Department of Internal Medicine, Erzurum, Turkey
*Erzurum Research and Training Hospital, Clinic of Endocrinology, Erzurum, Turkey
**Atatürk University Faculty of Medicine, Department of Hematology, Erzurum, Turkey

Rasagiline-Induced Hypoglycemia
Rasajiline Bağlı Hipoglisemi
As hypoglycemia can be a cause of mortality, it should be kept in Parkinson’s disease patients as they are prone to hypoglycemia.

**Keywords:** Hypoglycemia, rasagiline, diabetes

**Anahtar kelimeler:** Hipoglisemi, rasajilin, diyabet

**Ethics**

*Informed Consent:* It was taken.
*Peer-review:* Externally peer-reviewed.

**Authorship Contributions**

*Surgical and Medical Practices:* Nurhan Bilen, Ayşe Çarlıoğlu,
*Concept:* Nurhan Bilen,
*Design:* Yusuf Bilen, Ayşe Çarlıoğlu,
*Data Collection or Processing:* Nurhan Bilen,
*Analysis or Interpretation:* Yusuf Bilen, Ayşe Çarlıoğlu,
*Literature Search:* Yusuf Bilen,
*Writing:* Nurhan Bilen.

**Conflict of Interest:** No conflict of interest was declared by the authors.

**Financial Disclosure:** The authors declared that this study received no financial support.

**References**