P102

Duodenal levodopa infusion in advanced Parkinson's disease: a 5-year retrospective study

Simone Simoni[1,2], P. Nigro[2], M. Filidei[2], G. Cappelletti[2], F. Paolini Paoletti[1,2], M. Pierini[2], D. Castellani[3], M. Gaggiotti[3], N. Tambasco[1,2], L. Parnetti[1]

[1]Neurology Department, Perugia General Hospital and University of Perugia, Perugia, Italy
[2]Movement Disorders Center, Neurology Department, Perugia General Hospital and University of Perugia, Perugia, Italy
[3]Endoscopic Section of Gastroenterology and Hepatology of Perugia University Hospital, Perugia, Italy

Background: Duodenal Levodopa Infusion (DLI) is a diffuse treatment for patients with advanced Parkinson's disease (APD),[1] that provides continuous levodopa stimulation by means of a percutaneous endoscopic gastrostomy with a jejunal extension tube (PEG-J) connected to a portable infusion pump.

Aim and Methods: The aim of the study is to investigate the long-term[2] motor outcome and safety of DLI in patients with APD. We retrospectively identified all patients treated with DLI from October 2009 to January 2020 at the Center for Movement Disorders of Perugia Hospital.[3] Patients demographics and clinical features, including MDS-UPDRS III score, PEG-J procedures, causes for any discontinuation, reported complications and mortality were collected.

Results: The study included 30 APD patients (median age 72±5.6 years; mean disease duration 17.2±5.7 years). Mean treatment duration was 35.6±30.6 months. Overall, 156 PEG-J procedures were performed. One patient discontinued treatment after 6 months, due to peripheral neuropathy. Six patients died for causes not related to DLI, during the first 4 years of treatment. The rate of reported complications increased during the first four years of treatment. Specifically, after 2 years, the rates of complication diverged, being device-related complications more frequent (0.8±0.4) than stoma related complications (0.4±0.5). Device-related complications remain the most frequently reported for the whole follow-up period. MDS-UPDRS III score also increased over time, reaching the peak after the first five years of treatment.

Conclusion: A continue follow-up up to 5 years of treatment with DLI can reduce the rate of complications and provide a better control on motor symptoms.

References:

[1] Antonini A, Yegin A, Preda C, Bergmann L, Poewe W, GLORIA study investigators and coordinators. Global long-term study on motor and non-motor symptoms and safety of levodopa-carbidopa intestinal gel in routine care of advanced Parkinson's disease patients; 12-month interim outcomes. Parkinsonism Relat Disord. 2015 Mar;21(3):231–235.
[2] Zibetti M, Merola A, Ricchi V, Marchisio A, Artusi CA, Rizzi L, Montanaro E, Reggio D, De Angelis C, Rizzone M, Lopiano L. Long-term duodenal levodopa infusion in Parkinson's disease: a 3-year motor and cognitive follow-up study. J Neurol. 2013 Jan;260(1):105-14.
[3] Simoni S, Nigro P, Filidei M, Cappelletti G, Paolini Paoletti F, Castellani D, Gaggiotti M, Parnetti L, Tambasco N. PEG-J replacement for duodenal levodopa infusion in Parkinson's disease patients: a retrospective study. BMC Neurol. 2022 Jan 13;22(1):25.