

THERAPEUTIC EFFECT OF L-DOPA/CARBIDOPA INTESTINAL GEL ON DYSPHAGIA IN ADVANCED PARKINSON DISEASE: A PILOT STUDY



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Objective

In Parkinson's Disease (PD), the stiffness and bradykinesia of oropharyngeal musculature can cause hypokinetic dysarthria and, specially in advanced stage, the swallowing impairment with a negative impact of quality of life and increased risk of mortality.

We assessed the therapeutic short-term effects on oropharyngeal dysphagia, after L-Dopa/Carbidopa Intestinal Gel (LCIG) (Fig.1), administration, in advanced PD.



Fig.1: L-Dopa/Carbidopa Intestinal Gel (LCIG) Duodopa®

Materials and Methods

We enrolled 10 PD patients (3 female and 7 male) with mean age of 62.3 years. All patients were undergo to upper airway fibroendoscopy, including swallowing study, and to dysphagia scales before and after LCIG administration.

We studied oropharyngeal dysphagia employing bolus of several consistency during fibroendoscopy with simultaneous monitoring of vital parameters. Moreover, self-administration questionnaire and specific dysphagia scales were applied. This combined procedure will performed before (T0) and after 7-10 days (T1) from use of LCIG. This therapy permit a drug constant plasmatic level in order to reduce motor fluctuations and increase phases "on".

Results

All patients at baseline visit reported the swallowing difficulties. Significant differences between T0 and T1 findings were found. At T0 swallowing problems were observed in the pharyngeal phase in 10 patients, oral phase in 6 patients, and oral preparatory phase in 1 patient during fibroendoscopy (Fig. 2).

At T1 an improvement of self-test scores corroborate dysphagia scales we observed and significant main effect on pharyngeal phase of swallowing and sialorrhea sign were detected.

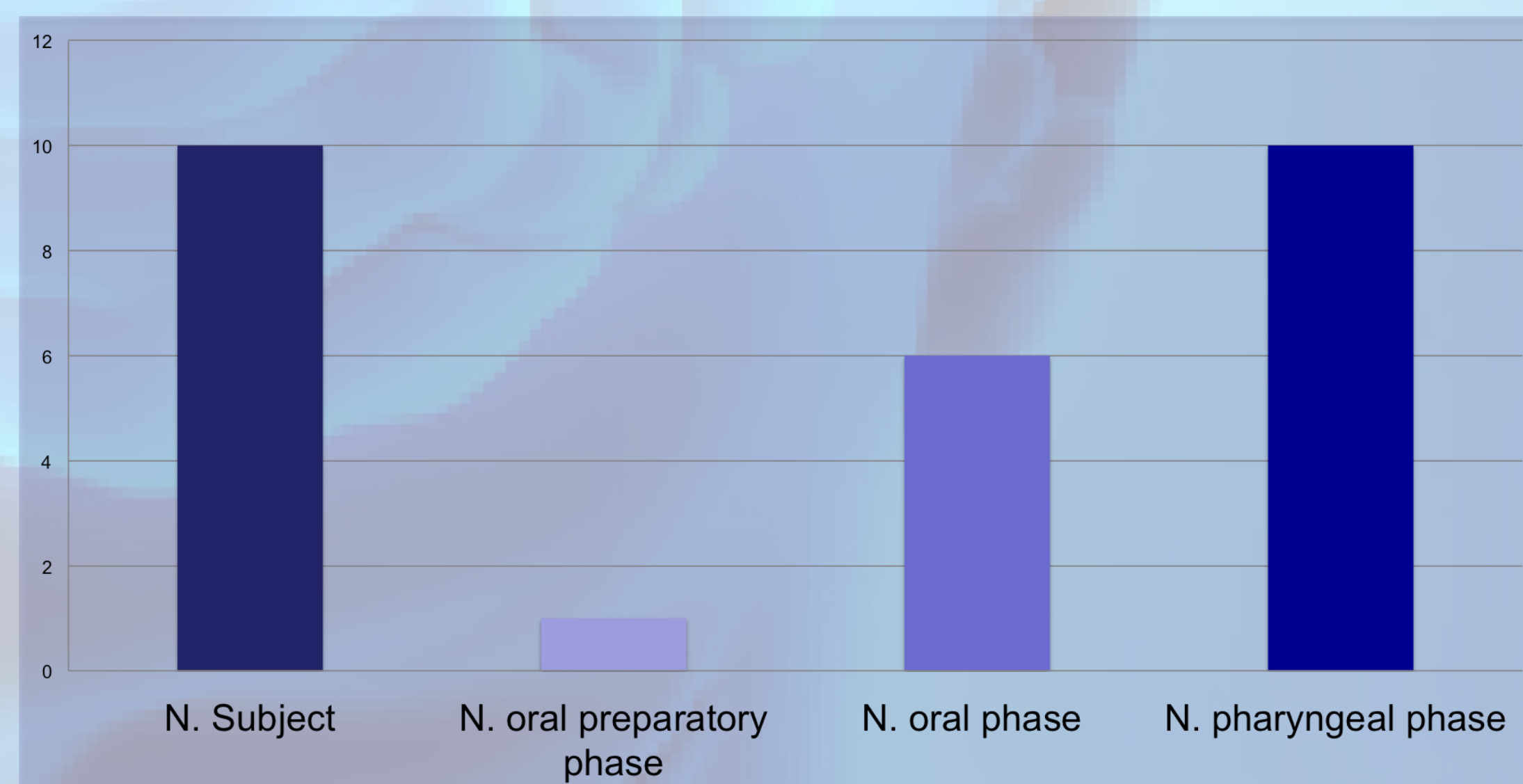


Fig.2: Phase frequency in 10 patients at T0

Discussions and Conclusions

The our results suggest that swallowing disorders in PD patients showed benefits after LCIG treatment. In fact, this therapy reduce the dysphagia improvement the motor symptoms.

Although dysphagia is a severe symptom associated with prognosis in patients with Parkinson's disease (PD), dysphagia tends to be overlooked until swallowing difficulties reach an advanced phase. Our study highlights the importance and frequency of swallowing deficits in advanced parkinsonism and at the same time affirms the effectiveness of this pharmacological treatment on dysphagia. We propose to expand the sample to have future confirmatory data.

References

- Fernandez HH, Lapane KL. Predictors of mortality among nursing home residents with a diagnosis of Parkinson's Disease. Med Sci Monit 2002 Apr;8(4):CR241-CR246.
- Troche MS, Sapienza CM, Rosenbek JC. (2008) Effects of Bolus Consistency on Timing and Safety of Swallow in Patients with Parkinson's Disease Dysphagia 23:26-32.
- Potulska A, Friedman A, Królicki L, Sychala A.(2003) Swallowing disorders in Parkinson's Disease. Parkinsonism Relat Disord. Aug; 9(6):349-53.