Gastro-intestinal symptoms in early stage parkinson's disease

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Background: In Parkinson's disease, here is growing evidence that the initial pathophysiological changes occur in the gastrointestinal tract before changes are seen within the brain. We aim to investigate the prevalence of GIT symptoms in early-stages PD and the association between GIT symptoms and the UPDRS.

Methods: 10 Early-Stage PD and 8 control patients were recruited from the Norfolk and Norwich University Hospital. UPDRS motor scores were completed at outpatient clinics with participants handed a PD-specific gastrointestinal questionnaire whereby both the severity and frequency was assessed. The symptoms assessed were abdominal pain, constipation, tenesmus, hard stools, reflux, dysphagia, early satiety and bloating.

Results: The frequency of symptoms within the PD group were tenesmus (80%), bloating (60%), reflux (60%), abdominal pain (50%), constipation (50%) and hard stools (50%), early satiety (20%) and dysphagia (10%). Tenesmus (p=0.02) was the only symptom to show a statistically significant difference between PD and control groups. The total median GIT symptoms score for PD and Control was 7.0 (IQR 2.0 to 9.0) and 1.0 (IQR 0.0 to 5.75), respectively with statistical signifcance (p=0.05). For total gastrointestinal and UPDRS motor scores, there was a positive correlation (r=0.239), although not significant (p=0.51).

Conclusions: Gastrointestinal symptoms were present in the majority of early-stage patients. Lower gastrointestinal symptoms were more prevalent that upper gastrointestinal symptoms which links in with Braak's hypothesis. Further research into the timing of the symptoms in relation to diagnosis is cruicial and may lead to earlier diagnosis of PD.