Could gastric *Helicobacters* other than *H. pylori* be of significance in idiopathic parkinsonism?

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Background *Helicobacter pylori* is an arbiter for progression of hypokinesia in idiopathic parkinsonism (IP) (*Helicobacter* 2010;15:279-95). Since rural-living and farm-experience are associated with IP, might zoonotic-transmission of animal-associated gastric helicobacters have a role?
Methods Sixty sets (antral/corporal) of archived DNA-extracts from gastric-biopsies in IP-probands (20 had been treated for *H. pylori*) were examined for *H. suis*, *H. heilmannii* s.s., *H. bizzozeronii* and *H. felis*, using species-specific PCRs and qPCRs. No spiral helicobacters had been found using cresyl-fast violet staining. Antral/corporal-biopsy immunohistochemical staining for non-*H. pylori* helicobacters (NHPH) (validated in NHPH-infected animal mucosae) was performed where *H. pylori* had not previously been detected (culture and, if negative, molecular-microbiology).
Results Prevalences, in the 60 IP-probands, were:- for *H. suis* 52 (binomial exact 95% C.I. 38, 65) %, *heilmannii s.s.* 18 (10, 30) %, *bizzozeronii* 32 (20, 45) %, *felis* 0 (one-sided 97.5% C.I. 6) %, compared with an *H. pylori* prevalence of 42 (29, 55) % on culture or, if culture-negative, PCR-positivity. No *Helicobacter* species was found in 1 proband, one species in 29, two in 16, three in 7, four in 1. There was no association between statuses for different species. Presence of *H. suis* was associated with a lower serum B12 concentration (-25 (95% C.I.-38, -9) %, p=0.005), *pylori* was not. Both were associated with lower folate (p=0.03 & 0.02). No NHPH was detected by immunohistochemistry.
Conclusion Molecular-microbiology and haematinic-association suggest that NHPH-infection is common in IP. Failure to identify NHPH on histopathology might reflect sparseness and poor mucosal-adhesion.