Author’s response to reviews

Title: LONGITUDINAL STUDY OF GASTROESOPHAGEAL REFLUX AND EROSIVE TOOTH WEAR

Authors:

Clive Wilder-Smith (cws@braingut.com)
Andrea Materna (lab@foointolerances.org)
Lukas Martig (lukasmartig@gmail.com)
Adrian Lussi (adrian.lussi@unibe.ch)

Version: 1 Date: 15 May 2017

Author’s response to reviews:

Dear Editor and reviewers

Thank you for your expert suggestions and comments. In the following I respond to each point individually.

Reviewer reports:

Reviewer- Methods section: did your patients undergo esophageal manometry prior to undergo MII-pH? If yes please detail it. We do not perform manometry as well as MII-pH. The placement technique in our lab has been validated and published by myself and I include the reference. (Wilder-Smith CH, Gennoni MA, Triller J, Scheurer U, Merki HS. Is a fluoroscopic verification of the electrode position necessary in ambulatory intragastric pH monitoring? Digestion. 1992;52(1):1-5.)

- Methods section: wich type of MII-pH device did you use Ohmega MMS or pHversaflex - Medtronic? The datalogger is from MMS (Ohmega system), the pH-impedance catheter from Sierra (pHversaflex). This has been clarified in the text.

- Methods section: when you reported normal value (Zerbib et al - REF 11) you defined those as European normal value. We do not have European normal value! Those are Belgian-French normal values and are in line with those previously described by Zentilin (Dig Liver Dis. 2006 Apr;38(4):226-32). Point taken and the reference to European has been removed.
The Zerbib et al. publication is from 2005 and at the time of analysis we chose this earlier paper for comparison, partly because of the more similar diet to our patients and the larger patient group.

- Why did not you evaluate baseline impedance value (MNBI) and post-reflux swallowed induced peristaltic wave (PSPW) index in your patients. It may be helpful to better distinguish patients who had progression of erosions from those who did not [Frazzoni M, et al. The added diagnostic value of postreflux swallow-induced peristaltic wave index and nocturnal baseline impedance in refractory reflux disease studied with on-therapy impedance-pH monitoring. Neurogastroenterol Motil. 2017 Mar;29(3)]. Please comment in the discussion session. I agree, that in future analysis PSPW and MNBI would be interesting to include in the analysis, especially as not previously validated or investigated for extra-oesophageal (such as dental) reflux and this is included in the discussion. The inclusion of a control group would be important for comparison.

Reviewer 2: In this well conducted study authors wanted to evaluate the progression of erosive tooth wear in a oligosymptomatic cohort of patients (57 patients with GERD symptoms < 2 per week) with positive pH-MII treated with a continous PPI (esomeprazolo 20 mg once) for one year. They observed in the majority of patients (74%) no progression of erosive tooth wear at one year (in 59 patients and at 2 years in 12 patients). However, as the author stated in the discussion, there are no data of erosive tooth wear progression in a control group of patient without taking PPI due to decision of the Ethical review board. However personally I'm not agree with this decision because I don't think that oligo or asymptomatic patients without erosive esophagitis needs continutive PPIs; therefore the inclusion of control group of asymptomatic patients, without taking PPI or taking PPI cyclically during the year, should have been included. We agree, but cannot change this decision. This is a battle we will be taking on again in the future.

Nonetheless I think that this paper illustrates something new in literature. However they have to discuss the clinical outcome of the study: is it feasible to prescribe longlife PPIs in oligo or asymptomatic patients just to avoid erosive tooth wear progression? I don't think so and it should be underlined in the discussion.

It could be useful do describe the progression rate of erosive tooth wear dividing symptomatic and oligo symptomatic patients. We have included a comment relating to the long-term treatment with PPIs, as suggested. The decision regarding long-term PPI use is very individual and in our patients is re-discussed every two years. Many patients do opt for long-term PPI treatment or surgery as no treatment becomes very costly in terms of dental treatments (often over 20,000 US dollars) and compromised aesthetics as well as function. We have included the change in BEWE in symptomatic vs oligosymptomatic GERD in the text (no difference).
Minor comments:

- How it was measured oesophagogastric junction distance for pH-MII catheter positioning? If it was with pull-through methods describe in the discussion that it is a limitation. We have added the technique for positioning and added the validation reference.

- Describe erosive esophagitis rate and grading. Added in Table 1

- In background page 3 line 11 add "patients" at the end of the sentence. Added.