---

**Proceedings Paper:**
Lau, M.S., Mooney, P.D., White, W.L. et al. (4 more authors) (2016) Does the Point of Care Test, SIMTOMAX, Distinguish between Coeliac disease and Noncoeliac Gluten Sensititivity? In: GUT. BSG 2016, 20-23 Jun 2016, Liverpool, UK. BMJ Publishing Group , A15-A15.

https://doi.org/10.1136/gutjnl-2016-312388.24

---

# BSG 2016 - Abstract Submission

*Small bowel*

BSG16-ABS-1460

## DOES THE POINT OF CARE TEST, SIMTOMAX, DISTINGUISH BETWEEN COELIAC DISEASE AND NON-COELIAC GLUTEN SENSITIVITY?

M. S. Lau*[1], P. D. Mooney[1], W. L. White[1], M. Burden[1], S. H. Wong[1], M. Kurien[1], D. S. Sanders[1]

[1]Academic Department of Gastroenterology, Royal Hallamshire Hospital, Sheffield, United Kingdom

**Does this abstract contain original data?:** Yes

**Will this abstract be published/presented prior to June 2016?:** No

**This abstract is:** None of the above

**Does your Endoscopy abstract include a video?:** No

**Preferred presentation type:** Oral or Poster

**Introduction:** Non coeliac gluten sensitivity (NCGS) is an emerging clinical entity with a prevalence of 0.5-13%. It is characterised by gluten related symptoms with a negative coeliac serology and no villous atrophy (VA). It is currently a diagnosis based on exclusion of coeliac disease (CD). We aimed to assess the role of Simtomax, an IgA/G deamidated gliadin peptide (DGP) based point of care test (POCT), in differentiating between NCGS and CD.

**Methods:** Group 1: we compared the sensitivities of 3 POCTs: Simtomax, Biocard [IgA-tissue transglutaminase (TTG)] and Celiac Quick Test (IgA/G/M-TTG). We prospectively recruited 100 patients referred with a positive endomysial antibody (EMA) attending for a gastroscopy. All patients undertook the 3 POCTs, EMA, TTG, and all underwent a gastroscopy with 5 duodenal biopsies. Sensitivities were measured based on their histology.

Group 2: the sensitivity of Simtomax in the general population was evaluated by prospectively recruiting 667 patients with gastrointestinal symptoms or ataxia attending for a gastroscopy. To reduce positive ascertainment bias, we excluded patients referred with a positive EMA, previous VA, known CD, self-reported gluten sensitivity, and those on a gluten free diet. All patients undertook Simtomax, EMA, TTG and a gastroscopy with 5 duodenal biopsies. Sensitivities were measured based on their histology.

Group 3: we demonstrated the sensitivities of Simtomax in a gluten sensitive population. 35 patients with self-reported gluten sensitivity attending for a gastroscopy were prospectively recruited. All patients undertook Simtomax, EMA, TTG and a gastroscopy with 5 duodenal biopsies. Sensitivities were measured based on their histology.

**Results:** Group 1 showed that Simtomax was the best POCT in detecting CD. The CD prevalence was 85%. In group 2, the sensitivity and negative predictive value (NPV) of Simtomax were comparable to that of EMA and TTG. The prevalence of CD was 4.95%. In group 3, Simtomax had 100% sensitivity and NPV in differentiating between CD and NCGS. 4 patients (11.4%) were diagnosed with CD, 4 (11.4%) with potential CD (positive serology but no VA) and 27 (77.1%) with NCGS (negative serology and no VA).

| Gp 1 | Sensitivity, % | Specificity, % | PPV, % | NPV, % |
|---|---|---|---|---|
| Simtomax | 96.5 | 6.67 | 85.4 | 25 |
| Biocard | 71.8 | 53.3 | 89.7 | 25.0 |
| Celiac Quick Test | 67.1 | 33.3 | 85.1 | 15.2 |
| Gp 2<br>Simtomax | 78.8 | 85.0 | 21.5 | 98.7 |
| EMA | 72.7 | 99.5 | 88.9 | 98.6 |
| TTG | 75.8 | 93.1 | 36.2 | 98.7 |
| Gp 3<br>Simtomax | 100 | 80.6 | 40.0 | 100 |
| EMA | 75.0 | 96.8 | 75.0 | 96.8 |
| TTG | 75.0 | 87.1 | 42.9 | 96.4 |

**Conclusion:** Simtomax was the most accurate POCT for detecting CD. In a lower CD prevalence group 2 cohort, its sensitivity remained comparable to TTG and EMA. Simtomax had 100% sensitivity in detecting CD in patients with self-reported gluten sensitivity, and 100% NPV in identifying patients with NCGS.

**Disclosure of Interest**: M. Lau: None Declared, P. Mooney: None Declared, W. White: None Declared, M. Burden: None Declared, S. Wong: None Declared, M. Kurien: None Declared, D. Sanders Grant/research support from: Tillotts Pharma for investigator led studies in coeliac disease. None of the funding sources had any input in the study design, access to study data, interpretation of the findings or drafting of the abstract.