Treat to Target: A Proposed New Paradigm for the Management of Crohn's Disease.

Guillaume Bouguen, Barrett G. Levesque, Brian G. Feagan, Arthur Kavanaugh, Laurent Peyrin-Biroulet, Jean-Frederic Colombel, Stephen B. Hanauer, William J. Sandborn

▶ **To cite this version:**

Guillaume Bouguen, Barrett G. Levesque, Brian G. Feagan, Arthur Kavanaugh, Laurent Peyrin-Biroulet, et al.. Treat to Target: A Proposed New Paradigm for the Management of Crohn's Disease.. Clinical Gastroenterology and Hepatology, 2013, 13 (6), pp.1042-1050.e2. 10.1016/j.cgh.2013.09.006 . hal-00878688

HAL Id: hal-00878688

https://univ-rennes.hal.science/hal-00878688

Submitted on 6 Dec 2013

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Supplemental material: Alternative targets

Assessment of intestinal inflammation by non-invasive imaging techniques, especially magnetic resonance enterography (MRE), is attractive given the opportunity to reduce discomfort, and complications relative to ileocolonoscopy. Furthermore MRE avoids the radiation exposure associated with computed tomography.(1) The overall sensitivity of MRE for the detection of disease activity is 80% (95% CI 77–83%) and specificity is 89% (95% CI 93–96%).(2) However long-term data regarding the outcomes of patients stratified by disease activity based on MRE assessment are, for the most part, lacking.(3) In a recently published abstract, in which 27 patients were assessed before and after treatment with either corticosteroids or adalimumab, the magnitude of reduction in a MRE activity index closely paralleled improvement in CDEIS scores.(3)

Since both ileocolonoscopy and MRE are costly, their repeated use to monitor patients for the presence of intestinal inflammation is constrained. Considerable attention has been placed on the development of surrogate markers of mucosal disease activity such as fecal biomarkers or CRP. Data showing a relationship between fecal biomarkers (calprotectin or lactoferrin) and clinically meaningful events are sparse necessitating further validation.(4–6) Elevated concentrations of CRP correlate well with both endoscopic and histologic evidence of inflammation. In contrast a poor correlation exists between CRP concentrations and symptoms.(7,8) A prospectivelongitudinalstudy that evaluated 101 patients with CD showed that CRP was reproducible and reliable, CRP concentrations decreased as the disease went into clinical remission.(9) A higher rate of clinical relapse was observed in patients with a persistently elevated CRP. However, up to one third of patients with intestinal inflammation do not have an elevated CRP concentration.(9–11) In several studies assessing biologics such as TNF antagonists or ustekinumab, normalization of CRP concentrations reflected objective evidence of decreased inflammation and increased the likelihood of sustained remission on maintenance therapy or the likelihood of clinical relapse in case of a persistently elevated CRP.(12–14) In the ACCENT 1, 75% of patients with normalization of the CRP (<0.5mg/dL) at week 22 maintained remission over the study period.(15) Thus, changes in CRP concentrations provide useful information in monitoring response to treatment and the risk of further relapse in the two third of CD patients who have a raised CRP concentration in the presence of active disease.(9)

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