

**IBS**  
**DISEASE**  
**MECHANISMS IN IBS**

Guy Boeckxstaens and colleagues have demonstrated that numbers of mucosal immune cells are not associated with visceral sensitivity (that is, increased sensitivity to colonic distention) in patients with IBS.

This finding is somewhat surprising, particularly given that data from animal models have indicated that microscopic inflammation (triggered by stress) leads to visceral hypersensitivity. Moreover, many other studies have reported that microscopic inflammation has an important role in the pathogenesis of IBS in humans. Boeckxstaens and his colleagues have a longstanding interest in the pathophysiology of IBS, so they decided to investigate the relationship between mucosal inflammation and abnormal pain perception to rectal distention.

The researchers used immunohistochemistry to assess microscopic inflammation of the colonic mucosa in 66 patients with IBS and 20 healthy volunteers. Rectal sensitivity was measured using an electronic barostat. "The most interesting result is that we did not find an increase in numbers of inflammatory cells, but rather a decrease," reports Boeckxstaens. Numbers of mast cells, T cells and macrophages were decreased in patients with IBS compared with healthy volunteers. In addition, it was found that the numbers of these cells were not associated with abnormal pain perception.

These findings have caused the researchers to question the role of inflammation (that is, the influx of inflammatory cells) in the pathogenesis of IBS. Instead they hypothesize that dysregulation of the mucosal immune system could be important. Thus, further research in this area is warranted. "Our work illustrates that the pathophysiology of IBS is, unfortunately, not as straightforward as has been suggested," says Boeckxstaens. Furthermore, he goes on to explain that IBS research is hampered by the heterogeneity of patients (diagnosis is on the basis of a common symptom pattern). Thus, the authors aim to focus their research on patients with post-infectious IBS, in the expectation that these patients represent a more homogenous population.

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