

Synbiotic treatment in ulcerative colitis patients

Lay summary

Ulcerative colitis (UC) is one of the two main forms of inflammatory bowel disease. It is associated with high morbidity and incurs significant social, commercial and NHS costs. For a variety of reasons, many patients do not respond to standard therapies, which often have undesirable side-effects. However, an inexpensive and non-toxic treatment based on the synbiotic concept may prove to be effective in these individuals. A synbiotic is a mixture of a probiotic (a live microorganism) and a prebiotic, which is a fermentable carbohydrate that serves as a food source for the probiotic, allowing it to grow better in the gut. The aim of this study is to determine whether a synbiotic comprised of fructooligosaccharides and inulin, together with a bifidobacterial probiotic (*Bifidobacterium longum*), that we have previously shown to reduce inflammatory processes in the gut lining (mucosa) in a short-term pilot trial, can permanently colonise the bowel, reduce mucosal inflammation, as well as induce and maintain remission in UC patients with active disease. It is planned to set up a double-blinded, randomised, controlled, investigation involving 46 patients for six months. The volunteers will be asked to complete a daily bowel habit diary, and rectal biopsies will be taken during visits to the gastroenterology clinic at zero, three and six months for a range of microbiological, immunological and biochemical analyses. Clinical disease indices and sigmoidoscopy scores will also be assessed. If the results from our pilot study can be reproduced in this long-term investigation, with patients being induced into, and most importantly, being maintained in disease remission, the synbiotic could become available for widespread use very quickly, and would provide an inexpensive and effective treatment for UC, making a significant contribution to relieving the clinical and financial burdens of this illness.

Professor George MacFarlane
University of Dundee