

Efficacy of a concomitant elemental diet to reduce the loss of response to adalimumab in patients with intractable Crohn's disease

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Conflict of interest

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Abstract

Background and Aim: Secondary loss of response to adalimumab (ADA-LOR) commonly occurs in patients with Crohn's disease (CD) treated with ADA. We evaluated the efficacy of concomitant elemental diet (ED) therapy to reduce ADA-LOR in adult CD patients.

Methods: Patients were divided into either an ED (≥ 900 kcal/day) or a non-ED group (< 900 kcal/day). Cumulative non-ADA-LOR rates were compared between groups. The effects of ED intake to reduce ADA-LOR was also assessed in anti-tumor necrosis factor-alpha (TNF α) naïve and infliximab (IFX)-intolerant or refractory CD patients. Serum ADA and TNF α levels were measured.

Results: We enrolled 117 CD patients into the ED (n = 25) or non-ED (n = 92) groups. Although the cumulative non-ADA-LOR rate was higher in the ED group than in the non-ED group, ED intake was not an independent reducing factor for ADA-LOR (adjusted hazard ratio = 0.725; 95% confidence interval: 0.448–1.180; p = 0.196) in all patients. ED intake was significantly more effective in reducing ADA-LOR in IFX-intolerant or refractory patients than in anti-TNF α naïve patients in a dose-related manner (p for interaction < 0.20). Serum ADA levels did not differ between the groups. Serum TNF α levels were significantly lower in the ED group than in the non-ED group at week 28 (p = 0.044) and week 52 (p = 0.043).

Conclusions: Concomitant ED therapy reduced ADA-LOR in IFX-intolerant or refractory patients, in a dose-related manner. Reductions in the TNF α levels by concomitant ED intake may contribute to reduce ADA-LOR in CD patients.

Keywords: elemental diet, loss of response, adalimumab, Crohn's disease, tumor necrosis factor-alpha (TNF α)