



## Perceived food intolerances and its impact on diet quality in patients with an ileoanal pouch

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Restorative proctocolectomy with ileal pouch-anal anastomosis is the surgical treatment of choice for patients with medically-refractory ulcerative colitis (UC) and familial adenomatous polyposis (FAP). Whilst quality of life is generally good, as many as 83% of patients associate dietary factors with the onset of symptoms<sup>(1)</sup> and around two-thirds employ some form of dietary restriction post-pouch creation<sup>(2,3)</sup>. There is growing interest to understand the role of diet (as a whole) on pouch function and how it can be used therapeutically. It is imperative that we know the dietary characteristics of pouch patients before attempting to introduce strategies altering their food choice. Since there is good rationale to assess overall diet quality to identify potential avenues for targeting dietary strategies, this study aimed to examine the frequency of perceived food intolerances and diet quality in patients with an ileoanal pouch and the relationship between these two indices. In this cross-sectional study, patients with an ileoanal pouch completed a food intolerance questionnaire and a validated 297-item semi-quantitative food frequency questionnaire (Monash Comprehensive Nutritional Assessment Questionnaire). Dietary data was used to score diet quality using the 2013 Dietary Guidelines Index (DGI), a scoring system which compares how closely an individual's dietary intake aligns with the Australian Dietary Guidelines (ADG). The DGI also comprises of 11 subcomponents (scored out of 10 respectively) based on each of the ADG guidelines and provides a total score of 110, with higher scores reflecting greater compliance to the ADG. In order to determine if perceived dietary intolerances was negatively associated with the intake of specific dietary factors, univariable and multivariable linear regression analysis of the correlation of intolerance and diet quality was performed. Of the 58 (10 FAP and 48 UC) patients studied, 81% of UC and 80% of FAP patients reported dietary intolerances. Mean total DGI score was 78 (95% CI: 74-80) of 110 in the overall pouch cohort with no differences across pouch sub-groups. However, only 5% of patients achieved a full score for food variety. Both uni- [OR -0.94 (-1.7,-0.10);  $p = 0.02$ ] and multivariable analysis (adjusting for age and sex) showed that only intolerances to dairy products were associated with reduced intake of lactose-containing dairy [OR -0.29 (-1.8,-0.08);  $p=0.03$ ]. No other significant correlations were found for overall or subcomponents of DGI scores. High rates of perceived food intolerances were observed in patients with an ileoanal pouch. However, only those with perceived dairy intolerances restricted their intake of lactose-containing dairy products. Additionally, patients with ileoanal pouch scored highly for overall diet quality but specific gaps in achieving better diet quality, particularly for diet variety were observed. These results provide some starting points for targeted dietary counselling to optimise nutritional health and potentially to improve pouch function these patients.

**Keywords:** diet quality; food intolerances; ileoanal pouch; ulcerative colitis

### Ethics Declaration

Yes

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