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Invited Editorial

Re. Manuscript: Performing routine follow-up biopsy 1 year after diagnosis does not affect long-term outcomes in coeliac disease. H. Pekki et al.

Editorial: Repeat duodenal biopsy for patients with coeliac disease: Physician heal thyself and dietitian heal the patient!

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Repeat duodenal biopsy in patients with coeliac disease remains an area of clinical uncertainty and research interest. There is a logical clinical approach which suggests that when a clinician has made a diagnosis of coeliac disease and demonstrated villous atrophy then a repeat duodenal biopsy is necessary to demonstrate histological remission – rationally closing the loop, voila! The perfect physician outcome.

This is further supported by data to suggest that persisting villous atrophy may be associated with increased risk of lymphoproliferative malignancies and increased mortality in patients with coeliac disease.[1, 2] Controversy surrounds the timing of undertaking a repeat duodenal biopsy with numerous studies now demonstrating that there are high rates of persisting villous atrophy in patients biopsied at 12 months and that this diminishes with time.[1, 2] Persisting villous atrophy may reflect difficulty with adherence (or inadvertent exposure), a super-sensitive immunological response in adherent patients or slow mucosal healing.

In this excellent paper by Pekki et al, the Finns have once again given us a contribution which provides answers to uncertainties in the management of patients with coeliac disease.[3] In this large clinical study (n=760) they have demonstrated that at 1 year 42% have persisting histological abnormalities (repeat biopsy was available in n=476). The investigators compared patients in whom a repeat biopsy was performed against those in whom no biopsy was undertaken. Malabsorption (46% versus 33%, $p<0.001$), severity of symptoms (24% versus 16%, $p<0.05$) and severe histology at the time of diagnosis ($p<0.001$) were more common in the group in whom a repeat biopsy was performed. However, the crucial and novel observation is this: in the group who did not have a 12 month follow up biopsy their long-term clinical outcomes and adherence were not significantly different to those who had been referred for a 12-month follow-up biopsy. What can we infer from this data? Firstly, that patient selection for 12-month follow-up biopsy may be physician driven based on severity of presentation. Secondly those patients do not necessarily derive any clinical benefit from this invasive procedure.

A secondary finding of this study which requires further exploration is that patients with incomplete mucosal recovery have a higher reported rate of respiratory and dermatological disease.

So what should we do as clinicians? In this era of personalised medicine (precision medicine) it is crucial to share these uncertainties with our patients. Patients with coeliac disease have expressed a preference for follow-up with specialist dietitians (with the knowledge that a medical opinion can be sought if necessary).[4] Perhaps follow-up should be devolved to dietitians, who after all are expert in the cornerstone of management for patients with coeliac disease – the gluten free diet (GFD). More specific or restrictive dietetic advice could be tailored to those with malabsorption, severe symptoms or severe histology at the time of diagnosis. Furthermore, novel urinary markers for continued gluten exposure may in time help to direct dietitians to consider a wheat-free GFD or gluten contamination elimination diet.[5, 6] Based on this study a repeat biopsy at twelve months may be clinically irrelevant and further work is required by the international coeliac research community to clarify the merit and timing of a second duodenal biopsy.

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