THERAPY

EPA—a new therapy for familial adenomatous polyposis?

A free fatty acid form of the omega-3 polyunsaturated fatty acid eicosapentaenoic acid (EPA) reduces both the size and number of polyps in patients with familial adenomatous polyposis (FAP) and could help prevent the development of colorectal cancer in these patients, according to a new study lead by Mark Hull, a gastroenterologist at Leeds Institute of Molecular Medicine, Leeds, UK.

FAP is an inherited condition in which numerous polyps form throughout the colon—if left untreated these polyps can undergo malignant transformation resulting in colorectal cancer. Patients with FAP are recommended to have prophylactic removal of the colon, regular endoscopic surveillance of rectal polyps and treatment with cyclo-oxygenase 2 inhibitors (such as celecoxib) to reduce the risk of colorectal cancer.

“Existing treatment for FAP (celecoxib) has undesirable cardiovascular side effects ... [and] the effect of drugs on FAP polyps gives a strong indication of potential efficacy against the more common, ‘sporadic’ polyps that are precursors to the majority of colorectal cancer,” explains

Hull. As omega-3 polyunsaturated fatty acids (for example, EPA) might have anticancer activity, Hull and his team investigated the effects of a new, enteric-coated, free fatty acid formulation of EPA (EPA-FFA) in patients with FAP.

The researchers recruited 55 patients with FAP who had undergone colectomy and were receiving regular endoscopic surveillance of their rectal polyps. Roughly half of these patients were randomly assigned to receive an oral dose of 2 g EPA-FFA daily for 6 months, whilst the remaining patients received the same dosage of placebo tablets and acted as controls. During endoscopic surveillance, the number and size of polyps in a defined area of the rectum were scored to minimize observer variability.

Hull *et al.* found that patients who received EPA-FFA had a marked decrease in polyp number (by 22%) and size (by 29.8%) compared with control patients (whose polyp burden, in fact, worsened over the 6 months of the study). Moreover, EPA-FFA was safe, well-tolerated and had equivalent chemopreventive efficacy to celecoxib in patients with FAP.

Rectal adenomas. Courtesy of M. A. Hull.

Hull hopes that EPA-FFA therapy could be introduced as an adjunct to endoscopic surveillance for the treatment of FAP and as chemoprevention for ‘sporadic’ colorectal neoplasia. “The reduction in FAP polyp number and size observed in patients treated with EPA-FFA should lead to testing of this drug in patients at risk of sporadic polyp recurrence to reduce the need for endoscopic surveillance and potentially reduce future colorectal cancer risk,” he concludes.

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