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RANDOMISED MULTICENTRE TRIAL OF NARROW BAND IMAGING (NBI) FOR DYSPLASIA DETECTION AT COLONOSCOPIC SURVEILLANCE IN ULCERATIVE COLITIS

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Introduction Chromoendoscopy at colonoscopy for surveillance in colitis, improves detection of dysplastic lesions by 3–4 fold, but has not gained widespread acceptance due to perceived increase in time for the procedure. Narrow band imaging (NBI) has been described as ‘electronic chromoendoscopy’. The aim of this trial was to assess the effect of NBI on dysplasia detection in colitis.

Methods 112 patients with long-standing UC were randomised in a 1:1 ratio to intervention group of examination with high definition NBI (n = 56) or to a control group of high definition WLE (n = 56) for colonoscopic extubation (Lucera; Olympus, Tokyo) in a parallel group design at 2 tertiary endoscopy units in the UK (6 endoscopists). Targeted biopsies of suspicious areas and quadrantic random biopsies every 10 cm were taken in both groups. The primary outcome measure was the proportion of patients with at least one area of dysplasia detected, which was analysed on an intention-to-treat basis. Outcome data were compared between the groups, both unadjusted and adjusted for withdrawal time, family history of colorectal cancer and previous history of dysplasia.

Results There was no difference in the primary outcome between the two groups, with five patients having at least one dysplastic lesion in each group (OR 1.00, 95% CI 0.27 to 3.67, p = 1.00), nor when adjusted for other variables (OR 0.69, 95% CI 0.16 to 2.96, p = 0.62). Overall dysplasia detection was 9% in each arm. During NBI colonoscopy, 17 endoscopically suspicious lesions were detected in 13 patients. Histopathology confirmed five dysplastic lesions in five patients (all five low-grade dysplasia). In the WLE arm, 11 suspicious lesions were detected in 8 patients and 7 lesions (in 5 patients) were neoplastic (low-grade dysplasia, n = 5 and high-grade dysplasia

n = 2). Although there was a trend that NBI detected more false positive lesions, this was not statistically significant (p = 0.06). Yield of dysplasia from random non-targeted biopsies was 1/2707 (0.04%).

Conclusion Overall in this multi-centre parallel group trial, even after adjustment, there was no difference in dysplasia detection when using NBI compared to high definition WLE colonoscopy. This confirms previous single centre tandem data, which suggests no improvement with NBI for colitis surveillance. Random background biopsies were ineffective in picking up dysplasia and we would therefore support the use of chromoendoscopy and targeted biopsies as the current endoscopic surveillance strategy of choice as suggested in the 2010 BSG guidelines.

Competing interests None.