

Role of Dye Chromoendoscopy in Colorectal Cancer Screening in Patients with Inflammatory Bowel Disease

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Patients with inflammatory bowel disease (IBD) have an increased risk of developing colorectal cancer (CRC) [1]. Chronic inflammation secondary to IBD can trigger molecular and immunologic changes that induce carcinogenesis unlike the adenoma-carcinoma pathway [2]. This difference of pathogenesis results in different morphologic patterns of IBD-associated neoplastic lesions which may present insidiously as sessile, ulcerating or structuring lesions [2]. This poses a diagnostic challenge endoscopically as these lesions may be missed during routine surveillance colonoscopy. Overall, these factors have been met with a thorough review of endoscopic techniques that can be applied to aide successful of diagnosis of these lesions.

An emerging discussion has been the use of dye spray chromoendoscopy (DCE) in which dyes are applied to the colonic mucosa to highlight the borders and topography of otherwise ill-defined colonic lesions [3]. This technique is now at the frontier of detecting IBD-associated neoplastic lesions. Several randomized clinical trials have shown that DCE is better than white light endoscopy (WLE) that is traditionally used to detect IBD-associated neoplasia [4].

A recently conducted retrospective study evaluated patients with chronic IBD with ill-defined or invisible neoplasia detected with High Definition (HD) WLE [5]. These patients were referred to endoscopists with an expertise in DCE to re-assess these lesions now with DCE. And the results shockingly showed several other ill-defined or invisible neoplastic lesions detected by DCE that were otherwise missed by HD-WLE. While this study did not do a head to head comparison between DCE and HD-WLE, it established the utility of DCE in addition to HD-WLE especially as a second-look to scout for any additional neoplastic lesions. However, major limitations associated with DCE have been lack

of solid prospective studies, limited availability in institutions worldwide and lack of training to utilize it.

With the advent of novel therapies for IBD, patients with IBD now have a prolonged life span. With the increased chronicity of the disease, we will now see an increased burden of patients who develop cancer. This necessitates improvisation of our cancer-detecting tool kit including further studying the role of DCE in detecting difficult to diagnose neoplastic lesions in patients with IBD.

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