



Dysplasia in IBD; what to do?

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Patients with inflammatory bowel disease have an increased risk of colorectal cancer (CRC). The overall risk relative risk is only twice that of the general population but is much higher in IBD patients with additional risk factors. CRC risk increases with time from diagnosis, with CRC rarely encountered within the first 8 years after disease onset. Extensive colitis is a major risk factor for CRC in UC, whereas left-sided disease has a lower risk. There is no increased risk of CRC in ulcerative colitis (UC) limited to the rectum. There is a strong correlation between location of diseased colon segment and location of colon cancer. An increased risk of CRC is only present in Crohn's disease (CD) patients with colonic involvement. High inflammatory activity with a high cumulative inflammatory burden and a structuring disease are an important risk factor. Further factors are young age at diagnosis, male sex and presence of first-degree relatives with CRC before 50 years of age. Primary sclerosing cholangitis [PSC] is a major risk factor for CRC in IBD patients, particularly those with UC. The chance of CRC development increases with colonoscopy dysplasia detection, especially for high grade dysplasia, multifocal invisible dysplasia and CRC.

Guidelines recommend surveillance colonoscopies, starting 8 years after disease symptoms onset. Dysplasia detection rate depends on the colonoscopy technique. Virtual chromoendoscopy and dye

based chromoendoscopy DCE techniques are recommended as they have a demonstrated increase in sensitivity. Targeted biopsies of suspicious sites should be taken. Random biopsies of normal looking mucosa have a very low diagnostic yield and increase the procedure time. Dysplasia is more frequently undetected in colon segments with active inflammation, so performing colonoscopy during remission is recommended when feasible.

The timing next CRC surveillance colonoscopy should take into account the chance of dysplasia development considering the mentioned factors. The recommendations differ slightly between the AGA, ECCO and British guidelines (BG) in the stratification of risk categories.

Very low risk patients, such as UC proctitis and CD without colonic involvement should follow bowel-cancer screening programmes recommended for the general population. Low risk patients (colitis affecting <50% of colon or extensive colitis with minimal inflammation) should have a surveillance endoscopy every 5 years (3 years in the BG). Intermediate risk patients (extensive colitis with mild to moderate activity or CRC in 1st degree relative >50 years) should have a surveillance endoscopy every 2–3 years. High risk patients (extensive colitis with severe activity, CRC in 1st degree relative <50 years, PSC, history of strictures and dysplasia)

should have a surveillance endoscopy every year. Random biopsies can be performed in PSC patients. The British guidelines recommend consideration of colectomy in very high-risk patients.

Any dysplasia detected should be classified according to site, size, shape (Paris classification), surface pattern (Kudo, Facile) and the surrounding mucosa (inflammation, other lesions, fibrosis). HGD and LGD are classified histologically based on differences in the distribution of cell nuclei. Inflammatory reactive atypia can mimic neoplastic dysplasia. Any invisible lesions (dysplasia in random biopsies) should prompt a repeat endoscopy in an expert centre.

A dysplastic lesion should be endoscopically resected if possible. En block resection is preferable. Random biopsies of the surrounding mucosa are not routinely necessary. Surveillance intervals should be decreased to 6–12 months in case of LGD and 3–6 months in case of HGD for 1 year and then annually.

Sporadic adenomas are dysplastic lesions outside of the area of colon affected by colitis and should be managed as in patients without colitis.

Surgery should be considered in a multidisciplinary meeting in cases of high risk of progression to CRC: multifocal visible or invisible high-risk dysplasia, poor mucosal visualisation on endoscopy (strictures, inflammation, pseudopolyps), coexistent neoplasia risk factors. Online calculators for risk estimation are available.

The proportion of incidental synchronous cancers identified at colectomy was 14% for those with visible HGD, 11% with invisible HGD versus 2.7% for visible LGD and 2.4% for invisible LGD. An extensive resection, a proctocolectomy has traditionally been recommended, however the extent of surgery in practice is often more limited (e.g. segmental, subtotal, total colectomy). More patients undergo

segmental colectomy for CRC or dysplasia than total proctocolectomy (with ileo-anal-pouch) in England. Also, it has not been established that 'limited resection' for IBD-CRCs is associated with reduced survival in comparison with more extensive surgical procedures. The recent BG have therefore advocated a 'pragmatic' approach to the extent of surgical resection (which can include segmental, subtotal, total and proctocolectomy with the distribution and grade of dysplasia, the extent and severity of bowel inflammation, patient comorbidity, as well as informed preferences towards surgery (and stoma) influencing the extent of resection required. Patients after a limited resection should be considered high risk and have surveillance at 3–6 months and then annually (1–3).

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