Conservative management of dysplasia in chronic ulcerative colitis

By

Abdrabou N. Mashhour

Assistant professor o f General and colorectal surgery

Faculty of medicine

Cairo university

2017

Introduction

- Patients with long standing ulcerative colitis have an increased risk of developing colorectal cancer
- CRC accounts for approximately 15% of all deaths in IBD patients

introduction

systematic review of published data estimates that:

- low-grade dysplasia in UC may confer a nine fold life time risk of developing cancer.
- A twelve fold life time risk of developing high-grade dysplasia or CRC.
- There is considerable variation among studies with reports of progression of low-grade dysplasia to invasive cancer in 0-57% of cases.

- The risk of CRC is significantly higher in UC with polypoid adenomatous lesions, within the extent of inflammation, despite endoscopic resection.
- Patients and physicians should take the increased risk into consideration during follow-up of these patients

- Surgery may be considered overtreatment as that the rate of progression from dysplasia to cancer may be as low as 5% at four years.

- Moreover there are now surveillance programmes aimed to detect and treat dysplasia or early cancer by endoscopy, even for patients with chronic extensive UC.

Practice Parameters for the Surgical Treatment of Ulcerative Colitis

Cancer Risk and Surveillance

1. Patients with long-standing UC should undergo endoscopic surveillance. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.

Practice Parameters for the Surgical Treatment of Ulcerative Colitis

. Endoscopic surveillance should involve 2 sets of 4-quadrant random biopsies at ~10-cm intervals throughout the colon and rectum, along with directed biopsies of suspicious lesions. Grade of Recommendation: Strong recommendation based on low-quality evidence, 1C.

Practice Parameters for the Surgical Treatment of Ulcerative Colitis

Total proctocolectomy, or surveillance endoscopy, is recommended for patients with UC and low-grade dysplasia. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1C.

Practice Parameters for the Surgical Treatment of Ulcerative Colitis

Total proctocolectomy, with or without IPAA, is recommended for patients with carcinoma, non-adenoma-like dysplasia-associated lesion or mass, or high-grade dysplasia. Grade of Recommendation: Strong recommendation based on moderate-quality evidence, 1B.

- Multiple studies have shown UC associated dysplasia is associated with a small likelihood of node negative cancer if surgery is deferred for up to five years.
- The risk of dysplastic progression from indeterminate to low-, or low- to high-grade, dysplasia in this cohort was relatively small.

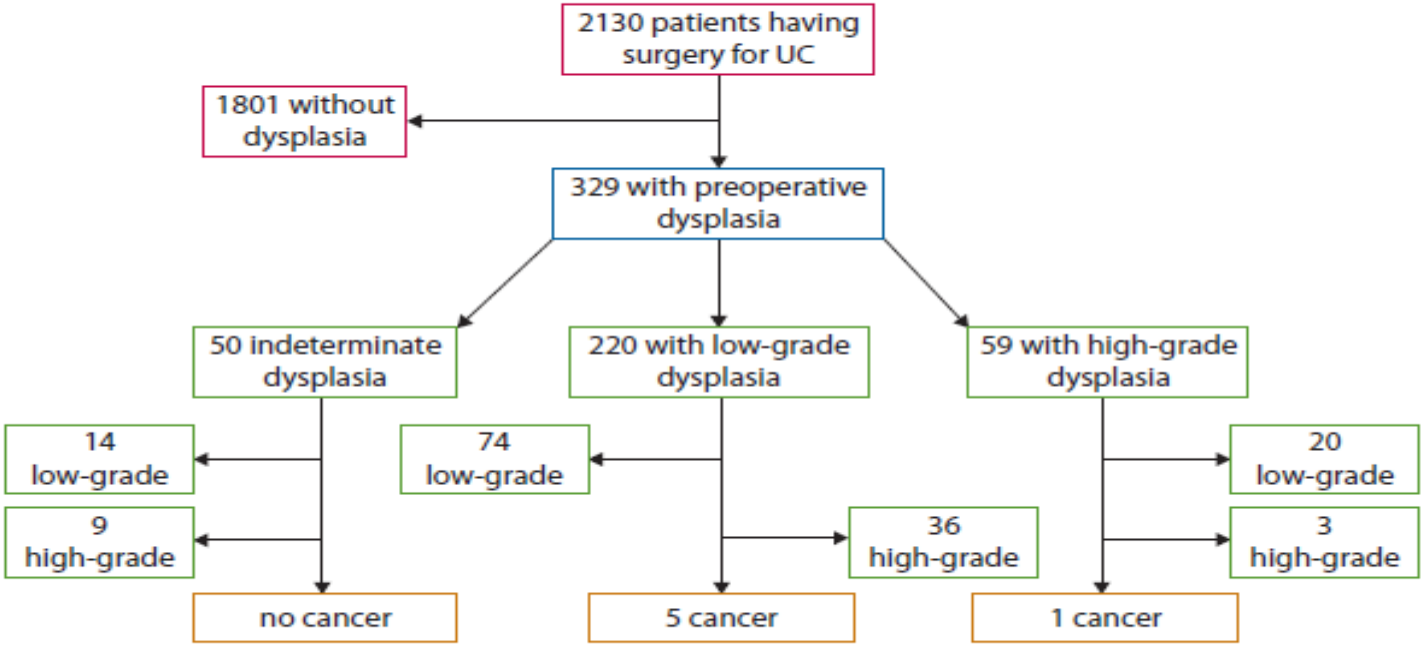

FIGURE 1. Flow chart outlining the distribution of patients with dysplasia and/or cancer. UC = ulcerative colitis.

CONCLUSION

This study has clearly identified that the presence of low- and high-grade dysplasia is associated with a relatively low risk of unsuspected CRC in patients with UC. Although

Table 1 Risk stratification and colonoscopy intervals proposed by British Society of Gastroenterology (BSG) for dysplasia surveillance in patients with inflammatory bowel disease (IBD) (adapted by Cairns *et al*[9])

Low risk (every 5 years)	Intermediate (every 3 years*)	High risk (annually)
▶ Extensive† colitis with *no* active (endoscopic or microscopic) inflammation ▶ Left-sided‡ colitis ▶ Crohn's colitis affecting <50% of the colon	▶ Extensive colitis with *mild* inflammatory activity ▶ Postinflammatory polyps ▶ Family history of CRC in first-degree relative more than 50 years	▶ Extensive colitis with *moderate/severe* inflammation ▶ Primary sclerosing cholangitis ▶ Stricture in past 5 years ▶ Dysplasia in past 5 years declining surgery ▶ First-degree relative with CRC <50 years

- The American Gastroenterological Association guidelines published in 2010 recommend obtaining at least 32 random biopsy specimens from all segments of the colon as the foundation of endoscopic surveillance

Techniques and technology to visualize dysplasia

Chromoendoscopy using diluted indigocarmine or methylene blue can be very useful to delineate the border and surface topography of non-polypoid dysplasia, which accounts for the majority of dysplasia.

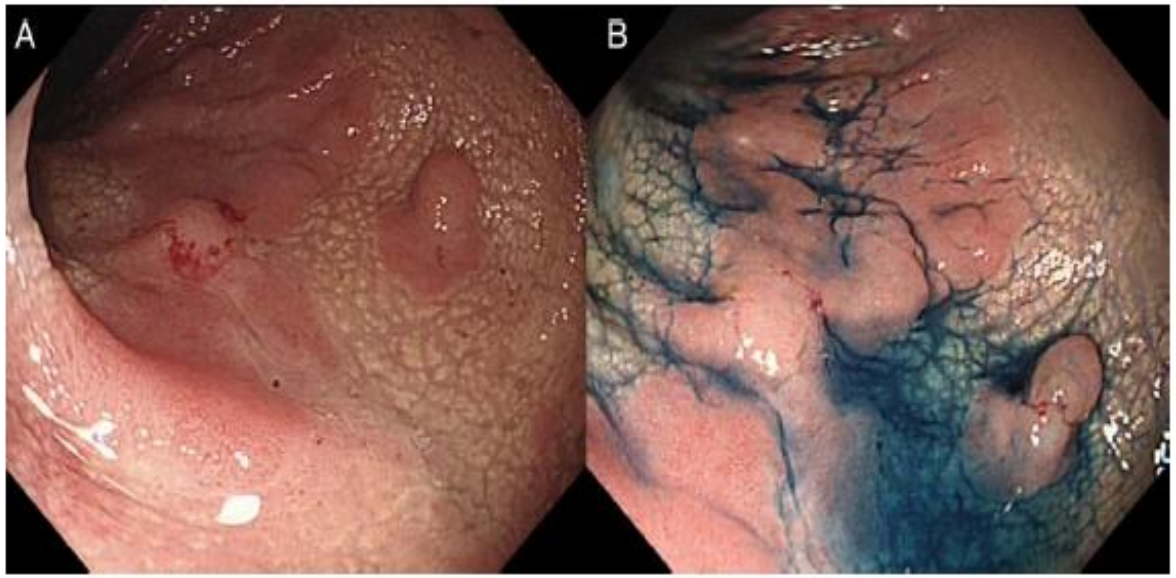

Figure 1 A dysplastic lesion in a patient with long-standing pancolitis, assessed with white-light endoscopy (A) and chromoendoscopy with indigo carmine (B). Note the clearer delineation of the lesion's margins post dye spray application.

- The high-definition colonoscope, which is equipped with more than 1 million pixels and brighter lighting, allows endoscopists to visualize the colonic mucosa with details that were not available in the era of fiberoptic or early video endoscope.

SCENIC consensus

- SCENIC (Surveillance for Colorectal Endoscopic Neoplasia Detection and Management in Inflammatory Bowel Disease Patients: International Consensus Recommendations) consensus sought to
- address two issues: (i) how should surveillance colonoscopy for detection of dysplasia be carried out; and (ii) how should dysplasia identified be managed?

- SCENIC also developed two recommendations on the following topics: (i) how should dysplasia be described macroscopically; and (ii) how should the statement be implemented into practice?

SCENIC Classification (Nomenclature) of IBD Colorectal Dysplasia

- The term DALM can be very confusing as it is not specific. A DALM can be a polyp, non-polypoid or mass.
- SCENIC panelists therefore developed a new set of terms to describe the macroscopic appearance of dysplasia

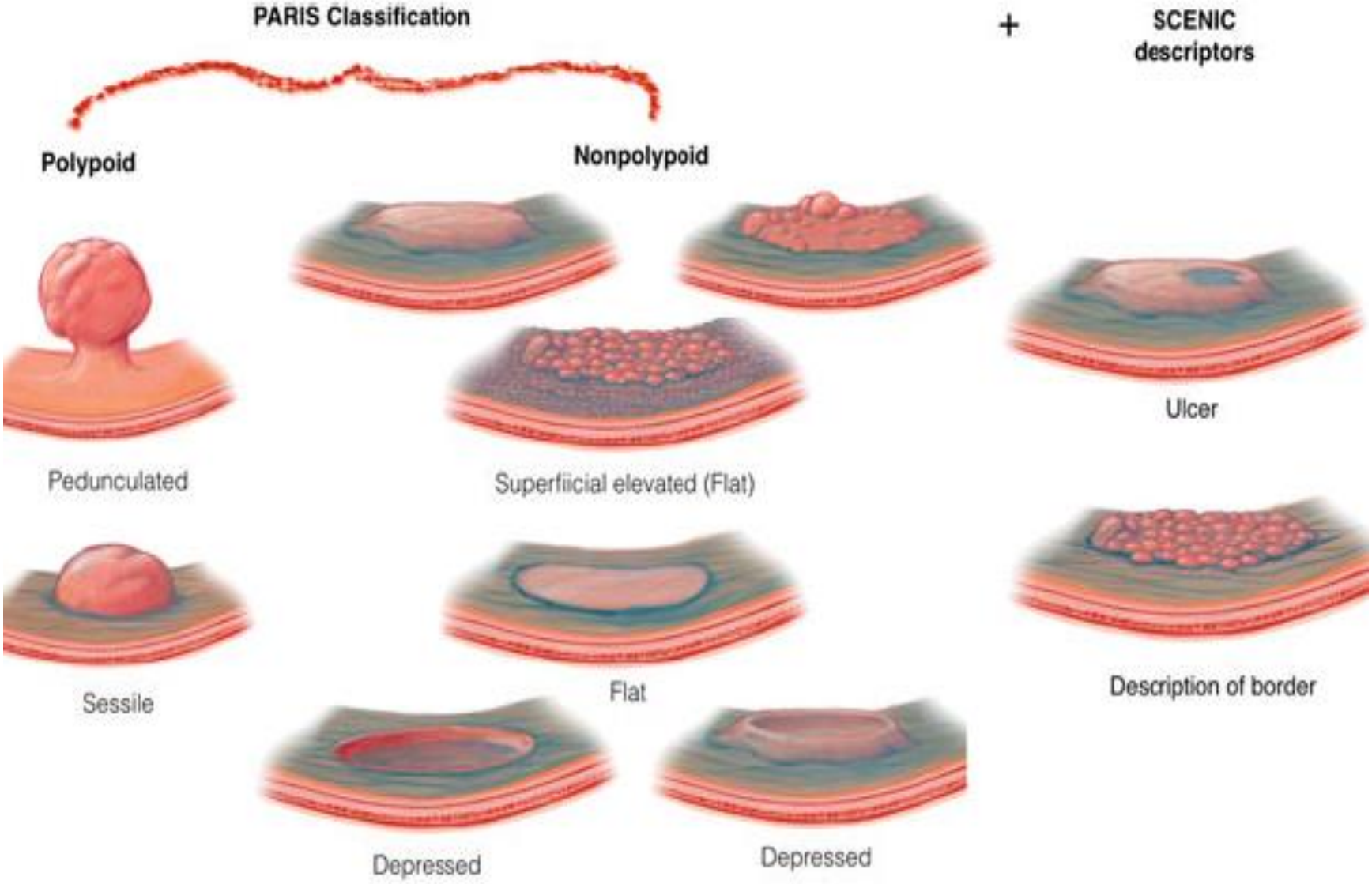
PARIS Classification
+
SCENIC descriptors
Polypoid
Nonpolypoid
Pedunculated
Superfiicial elevated (Flat)
Ulcer
Sessile
Flat
Description of border
Depressed
Depressed

Table 1 Summary Recommendations for Surveillance and Management of Dysplasia in Patients with IBD

Statement 1	When performing surveillance with white-light colonoscopy, high definition is recommended rather than standard definition.(80% agreement; strong recommendation; low-quality evidence)
Statement 2	When performing surveillance with standard-definition colonoscopy, chromoendoscopy is recommended rather than white-light colonoscopy.(85% agreement; strong recommendation; moderate-quality evidence)
Statement 3	When performing surveillance with high-definition colonoscopy, chromoendoscopy is suggested rather than white-light colonoscopy.(84% agreement; conditional recommendation; low-quality evidence)
Statement 4	When performing surveillance with standard-definition colonoscopy, narrow-band imaging (NBI) is not suggested in place of white-light colonoscopy.(84% agreement; conditional recommendation; low-quality evidence)
Statement 5	When performing surveillance with high-definition colonoscopy, narrow-band imaging is not suggested in place of white-light colonoscopy.(80% agreement; conditional recommendation; moderate-quality evidence)
Statement 6	When performing surveillance with image-enhanced high-definition colonoscopy, narrow-band imaging is not suggested in place of chromoendoscopy.(90% agreement; conditional recommendation; moderate-quality evidence)
Statement 7	After complete removal of endoscopically resectable polypoid dysplastic lesions, surveillance colonoscopy is recommended rather than colectomy.(100% agreement; strong recommendation; very low-quality evidence)
Statement 8	After complete removal of endoscopically resectable non-polypoid dysplastic lesions, surveillance colonoscopy is suggested rather than colectomy.(80% agreement; conditional recommendation; very low-quality evidence)
Statement 9	For patients with endoscopically invisible dysplasia (confirmed by a GI pathologist) referral is suggested to an endoscopist with expertise in IBD surveillance using chromoendoscopy with high-definition colonoscopy. (100% agreement; conditional recommendation; very-low-quality evidence)

Table 2 Overview of current recommendations for dysplasia detection in inflammatory bowel disease (IBD) by major international societies

CRC surveillance recommendations in inflammatory bowel disease	
SCENIC (2015)[13]	'When white light colonoscopy is performed, high definition is recommended rather than standard definition' 'During standard-definition colonoscopy, chromoendoscopy is recommended rather than white-light colonoscopy' 'When performing surveillance with high-definition colonoscopy, chromoendoscopy is suggested rather than white-light colonoscopy' 'Narrow-band imaging is not suggested in place of standard or high definition white-light colonoscopy or chromoendoscopy'
British Society of Gastroenterology (BSG) (2011)[7]	'Pancolonic dye spraying with targeted biopsy of abnormal areas is recommended. If chromoendoscopy is not used, the strategy of random biopsy should be followed'
European Crohn's and Colitis Organization (ECCO) (2013)[8]	'Pancolonic chromoendoscopy should be performed during surveillance colonoscopy, with targeted biopsies of any visible lesion. If appropriate expertise for chromoendoscopy is not available, random biopsies (4 every 10 cm) should be performed; however, this is inferior to chromoendoscopy in the detection rate of neoplastic lesions' 'Other image enhancement techniques such as narrow band imaging or autofluorescence have not been convincingly demonstrated to be superior to white light endoscopy or chromoendoscopy in the detection of neoplastic lesions, thus they cannot currently be recommended for colitis surveillance'
European Society of Gastrointestinal Endoscopy (ESGE) (2014)[18]	'Routine use of pancolonic chromoendoscopy with targeted biopsies for neoplasia surveillance in patients with long-standing colitis is recommended. In appropriately trained hands, in the situation of quiescent disease activity and adequate bowel preparation, non-targeted four-quadrant biopsies can be abandoned'

- THE NEW PARADIGM of colonoscopy for surveillance of dysplasia in patients with IBD places the emphasis on chromoendoscopy to allow high-quality visual inspection of the mucosa. Targeted biopsies are subsequently carried out on areas suspicious for dysplasia and resections are done for endoscopically resectable suspicious lesions.

Table 3 Barriers to effective inflammatory bowel disease (IBD) dysplasia surveillance

Issue	Comment
Adherence to surveillance intervals	Requires a robust recall system. Particularly relevant to patients in clinical remission, who may not be keen to have repeat colonoscopies
Quality of bowel preparation	Preparation should be good, ideally excellent
Mucosal inflammation	Active mucosal inflammation makes endoscopic detection and lesion characterisation more complex and may lead to false-positive dysplasia diagnosis in histopathology
Endoscopist expertise	Endoscopists should be familiar with both the chromoendoscopy technique and with IBD lesion characterisation. Experience is crucial for characterising detected lesions—often challenging in colitic colons. Presence of postinflammatory polyps can make identification of such abnormalities even more challenging
Equipment	HD imaging set-up and chromoendoscopy should be available for optimal surveillance
Unit capacity	Appropriate time needs to be allocated in endoscopy lists to permit chromoendoscopy and to allow for meticulous mucosal inspection during withdrawal. British Society of Gastroenterology (BSG) guidelines recommend adding 15 min per procedure

Thank you