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Indications and techniques for lower intestinal endoscopy

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The search for inflammatory and neoplastic lesions are the main indications for colonoscopy. A high rate of detection of polyps has become a quality criterion that depends on skilled handling of the colonoscope, on expertise and concentration during the examination, on excellent bowel preparation, and on a high standard of technical equipment. The diagnostic benefits outweigh the risk of bleeding, perforation and infection in almost all situations. Contraindications are signs of perforated intestine or imminent perforation due to deep ulcerations, necroses, or fulminant colitis. The patient's comorbidity must be considered to assess the physical stress of bowel preparation, colonoscopy and sedation. Informed consent is necessary and must be documented in all cases. It is advisable to explain planned therapeutic manoeuvres before the examination, since all non-invasive polyps must be removed completely. Total colonoscopy is possible in 95–99% of cases, but technical efforts are under way to solve the problem of looping and fixed colon angulations. Optimising optical imaging is another main focus of industrial development. The combination of narrow-band imaging, zoom magnification, and high-definition processor technology is currently the most promising tool for identifying small and flat lesions in the colon.

Key words: colonoscopy; endoscopic techniques; complication rates; colon polyps; bowel preparation.

Direct visualisation of the colonic mucosa by endoscopy brought about great advances in the understanding and treatment of bowel diseases. It is still the method of choice for comparing macroscopic and microscopic appearances of mucosal abnormalities. Learning the technique of colonoscopy is a challenge for those acquiring

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gastroenterological expertise. Assessing good diagnostic and therapeutic indications for colonoscopy and correctly evaluating the pathological findings is a matter of continuous education and knowledge. Science has to deal with new and better technical devices that lower the risk of complications, improve patient comfort, and give detailed optical information.

INDICATIONS FOR COLONOSCOPY

Despite low complication rates, it is necessary to check indications for colonoscopy carefully (Table 1). Standardised colonoscopy reports include documentation of procedure indications in all cases.[1] Symptoms of colonic inflammation or ischaemia – e.g. abdominal pain, diarrhoea, malabsorption, perianal bleeding, and all other changes in bowel habits, as well as unexplained anaemia, positive faecal blood test, or weight loss – should be investigated with endoscopy. There is no indication for repeated colonoscopy in the case of unexplained abdominal discomfort in patients who had no pathological findings in former endoscopies. Short-segment, exophytic or continuous bowel wall thickening or signs of impaired stool passage detected by abdominal X-ray, ultrasonographic examinations, abdominal computed tomography (CT) or magnetic resonance imaging (MRI) are indications that emerge with credit from better imaging quality.

Colonoscopy is becoming increasingly important for early detection and prevention of colorectal carcinoma. It is recommended that the general population should be screened once every 10 years, starting at age 55.[2] Of patients with inflammatory bowel disease with colonic involvement, more than one third should undergo dysplasia screening every 1–2 years, beginning 8–10 years after disease onset.[3,4] Increased genetic risks leading to inherited cancer syndrome, such as hereditary non-polyposis colon cancer syndrome (HNPCC), and premalignant conditions for colorectal cancer (i.e. serrated adenomas) are under consideration for defining optimal surveillance intervals. Given the polyp/carcinoma relationship according to Vogelstein, and the results of large cohort studies in the USA and Europe, there is no doubt about the effectiveness of endoscopic polyp removal in carcinoma prevention.[5] In 2006 the American guidelines for colonoscopy surveillance after polypectomy were updated

Table 1. Indications for colonoscopy.

Constipation
Diarrhoea
Malabsorption
Abdominal pain
Perianal bleeding
Iron deficiency anaemia
Weight loss
Post-polypectomy surveillance
Prevention/aftercare of colorectal carcinoma
Search for primarius in cancer of unknown origin
Pathological bowel wall thickening detected by other imaging procedures
Suspected short strictures of colon
Lost foreign bodies in the rectum