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Mitchell S. Cappell

Precancerous Colonic Lesions and Colonic Adenocarcinoma 1

The Pathophysiology, Clinical Presentation, and Diagnosis of Colon Cancer and Adenomatous Polyps
Mitchell S. Cappell

A review of the pathophysiology, clinical presentation, and diagnosis of colon cancer and colonic polyps is important and timely. This field is rapidly changing because of breakthroughs in the molecular basis of carcinogenesis and in the technology for colon cancer detection and treatment. This article reviews colon cancer and colonic polyps, with a focus on recent dramatic advances, to help the primary care physician and internist appropriately refer patients for screening colonoscopy and intelligently evaluate colonoscopic findings to reduce the mortality from this cancer.

Screening of Patients at Average Risk for Colon Cancer 43
Jack S. Mandel

Both the incidence and the mortality from colorectal cancer can be substantially reduced by primary and secondary prevention. There are many screening tests for colorectal cancer, and any test should result in a reduction in colorectal cancer incidence and mortality. If the age-eligible population undergoes these screening tests, the burden of colorectal cancer should be substantially reduced. The scientific evidence related to secondary prevention, specifically screening of individuals at average risk for colorectal cancer, is presently reviewed.

Surveillance of Patients at High Risk for Colorectal Cancer 61
Sapna Syngal, Prathap Bandipalliam, and C. Richard Boland

Colorectal cancer (CRC) mortality may be greatly reduced by clinically feasible screening programs. The benefits of surveillance of
high-risk programs are evident. Cancer mortality can be dramatically reduced by eradication of precursor lesions and by detection of cancer at an early and highly curable stage. Available screening methods, recommended intervals, and screening for other associated cancers are reviewed for specific high-risk groups.

Prevention and Therapy of Colorectal Cancer
Ernest T. Hawk, Asad Umar, Ellen Richmond, and Jaye L. Viner

Colorectal cancer is expected to affect more than 146,000 and kill more than 57,000 Americans in 2004. Increased understanding of carcinogenesis is transforming clinical approaches to all stages of this disease. During the last 5 years, four new drugs have been approved for colorectal cancer treatment, and substantial progress has been made in identifying and developing agents that prevent or delay carcinogenesis. These advances substantiate target-driven approaches to cancer prevention and treatment, and provide fruitful opportunities for future investigations.

Novel Technologies for the Evaluation and Treatment of Gastrointestinal Malignancies

The Emerging Role of Virtual Colonoscopy
Zvi Lefkovitz, Robert Shapiro, Stephen Koch, and Mitchell S. Cappell

A review of the current status of virtual colonoscopy is germane and topical. Clinicians need to be knowledgeable about this rapidly evolving and clinically relevant technology to understand the test benefits and limitations and to refer patients for this test appropriately. A critical review of the exponentially expanding literature on this subject is important. This article describes the imaging methods, adjunctive techniques, and radiologic interpretation of CT colonography, and comprehensively and critically reviews the clinical data to help the clinician evaluate the current and potential applications of this technology.

Endoscopic Ultrasound in the Diagnosis, Staging, and Management of Gastrointestinal and Adjacent Malignancies
Radha Tamerisa, Atsushi Irisawa, and Manoop S. Bhutani

Endoscopic ultrasound (EUS) is a superior modality for local staging of gastrointestinal cancer. In interventional endosonography linear array echoendoscopes permit real-time EUS-guided puncture of target lesions for cytologic evaluation of such lesions. This article describes the basic principles of EUS, established indications pertaining to gastrointestinal cancer and other malignancies, and emerging indications for this minimally invasive technology.
Novel Endoscopic Therapies for Gastrointestinal Malignancies:
Endoscopic Mucosal Resection and Endoscopic Ablation  
Gregory J. Monkewich and Gregory B. Haber

Gastrointestinal malignancies are often detected at advanced stages when the prognosis is poor. Screening guidelines that vary according to the regional disease prevalence are needed. High-resolution endoscopy, magnification endoscopy, chromoendoscopy, light autofluorescence endoscopy, and optical coherence tomography are new technologies designed to improve endoscopic detection. Once detected, lesions must be accurately staged, including depth of mucosal penetration and lymph node involvement, to determine endoscopic resectability. Widely applicable, relatively safe, and minimally invasive alternatives to surgery are needed. Endoscopic mucosal resection and endoscopic ablation are potentially curative for malignancies limited to the mucosa, obviating the need for surgery in these patients.

Laparoscopic Surgery for the Prevention, Palliation, and Cure of Gastrointestinal Malignancies  
Jose E. Torres, George Tsoulfas, Kareem Hamdy, and Carol E.H. Scott-Conner

The development of surgical laparoscopic techniques has revolutionized the way surgeons approach many diseases, including cancer. This article briefly discusses the historical development of surgical laparoscopy; describes laparoscopic surgical techniques, with a focus on techniques for common intra-abdominal malignancies; and reviews laparoscopic management of common gastrointestinal malignancies.