Chapter 2

Endoscopic Evaluation of Lesions With White-Light Endoscopy and Chromoendoscopy

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Introduction

Our ability to treat disease is directly dependent on our ability to see it. Endoscopic technology has improved from basic fiber-optic, low-resolution instruments, to high-definition, contrast-enhanced systems. These advances have enabled organ-preserving resection of superficial neoplasia throughout the gastrointestinal (GI) lumen. High-definition white-light endoscopy (WLE) has changed the way we manage various diseases in GI practice. An example is the transformative ability to resect an early esophageal cancer endoscopically, as an outpatient procedure, compared to the highly invasive surgical alternative of esophagectomy. Advantages of WLE are that it does not require special equipment, it is widely available, and allows visualization of a wide field. However, it is limited in its ability to identify subtle dysplasia. Chromoendoscopy (CE), a technique that increases the contrast between normal mucosa and neoplasia, either via electronic spectral enhancement or with the use of topical dyes, has facilitated the evaluation of superficial GI neoplasia. In this chapter, we will review historical and current literature, practical methodology, and outcomes of white-light and dye-based CE. Digital CE will be covered in other chapters. Our focus will be on the evaluation of neoplasia in the esophagus, stomach, and colon.

Paris Classification

The Paris classification was developed in 2002 by a group of leading endoscopists, surgeons, and pathologists to describe the morphology of neoplastic lesions, with the goal of predicting lesions suitable for endoscopic resection and those with deep invasion. Knowledge of the Paris classification, along with CE, is essential for the categorization of GI neoplasia. The Paris classification divides lesions into polypoid and nonpolypoid (Figure 2-1).[1] A polypoid lesion protrudes

Draganov PV, Gotoda T, Yang D, eds. *Advanced Techniques for Endoscopic Resection in the GI Tract* (pp 7-22).