

Current role of endoscopy and surgery in the management of early cancer of the upper gastrointestinal tract

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Traditionally, early cancer has been defined as those tumours that limit the depths of penetration of the wall of the upper gastrointestinal (GI) tract to the submucosal layer. In that particular situation it is not primarily relevant whether lymph node metastases are present or not. The area where this definition has been most widely used is within the stomach. With the introduction of modern endoscopic magnification tools, vital spraying equipment, high frequency endoscopic ultrasonographic technologies, we have entered an era where more and more cases will be diagnosed with “early neoplastic” lesions in the upper GI tract. At the same time it is obvious that new and more biologically sound concepts will be and have been introduced which clearly delineate the boundaries within which endoscopic, transoral techniques that can and in the future shall ultimately be applied. Similar boundaries have been defined when conventional surgery with radical lymph node dissection should be carried out. However, novel concepts are presently explored when other minimal invasive techniques

are used to carry out functional preserving resections combined with local lymph node clearance. In similar situations e.g. the use of sentinel node dissection may become mandatory.

In the field of endoscopic resection of early malignancies the development of mucosal resection technologies expands the mucosal segments that can be incorporated in the respective procedure. Furthermore, the concept of functional preserving resection has now been expanded into a variety of different fields such as: vagus sparing partial or local oesophagectomy, vagal and pylorus sparing gastric resection with local radical lymph node dissection, and – last but not least – pancreas sparing duodenectomy in patients with familial adenomatous polyposis (FAF) with duodenal polyposis and intraepithelial cancer.

Definitely, the minimal invasive surgical approach to the management of patients with early neoplastic lesions of the GI tract has opened up novel oppor-

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tunities and therapeutic concepts, which have potential benefits for the patients. However, there are also associated pitfalls and hazards mainly based on the very important prerequisite, namely that all these lesions, if adequately treated, basically should not expose the patients to an enhanced risk of succumbing due to recurrent and progressive disease. This very important presumption rests on the basic concept that “adequate” treatment is offered even in situations where the tumour may have spread to the local lymph nodes. If, for instance, a patient with a T1sm1-tumour exhibits signs of N₁ disease and is not submitted to adequate radical operation, that patient has been exposed to an unacceptable risk of having had a suboptimal therapy, which

might have the flavour of being fancy but not evidence-based. Accordingly, if currently minimal invasive technology is applied in the management of patients with early cancers, it is seriously recommended that it is done within the framework of controlled clinical trial protocols.

Tentative management algorithm for early neoplastic lesions

Although construction of management algorithms have a »best before date label«, it still seems relevant to present such algorithms focusing on three major areas of the upper GI tract: the distal oesophagus, stomach and duodenum.

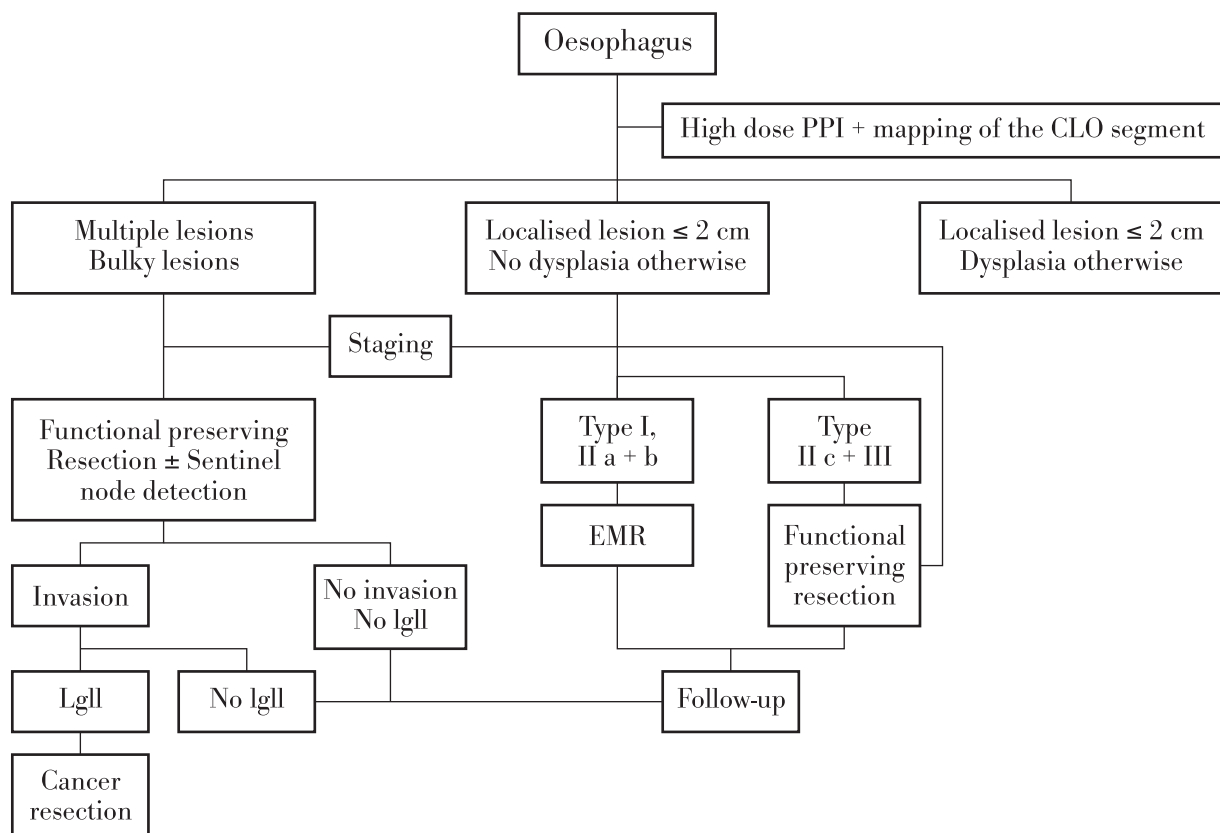


Figure 1. Tentative algorithm for the management of early oesophageal cancer.

Legend: CLO – columnar lined oesophagus, EMR – endoscopic mucosal resection, Lgll – lymph nodes, PPI – proton pump inhibitor.

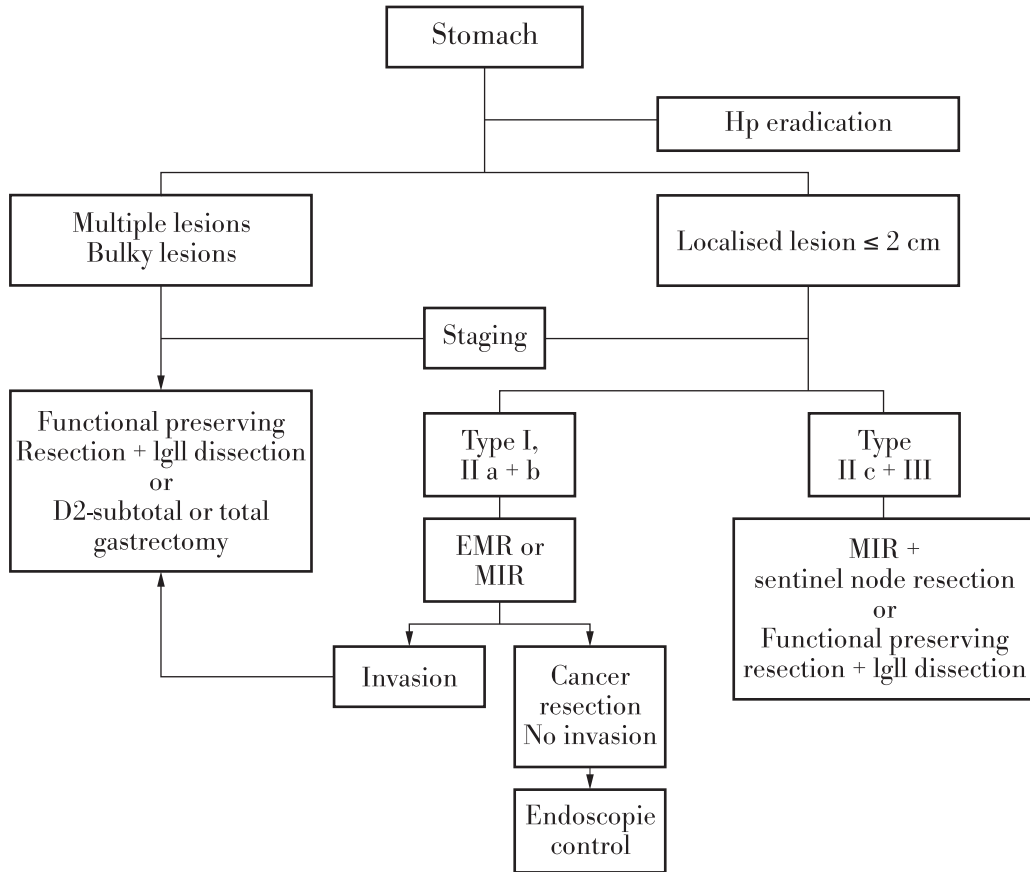


Figure 2. Tentative algorithm for the management of early gastric cancer.

Legend: EMR – endoscopic mucosal resection, Hp – Helicobacter pylori, Lgl – lymph nodes, MIR – minimal invasive resection.

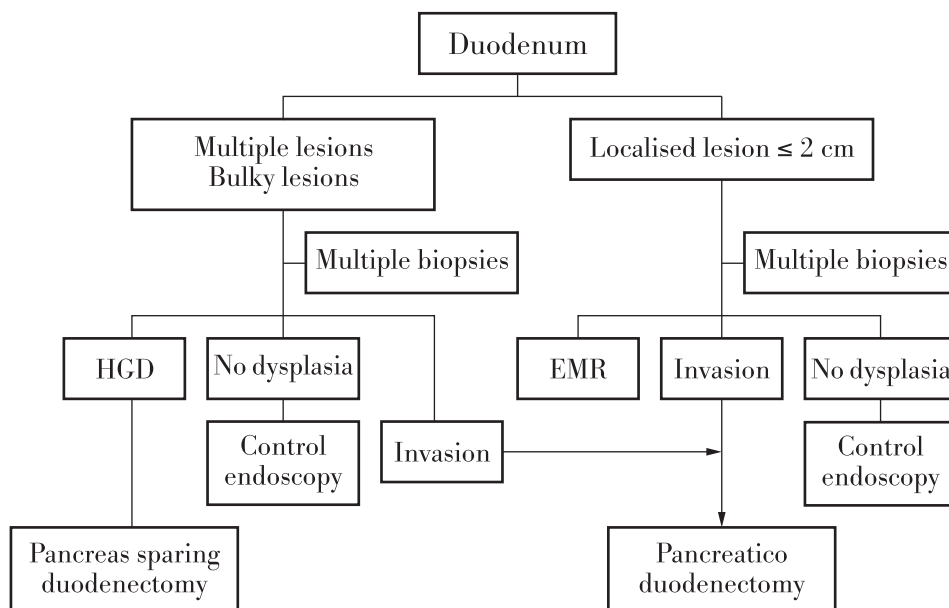


Figure 3. Tentative algorithm for the management of early duodenal cancer.

Legend: EMR – endoscopic mucosal resection, HGD – high grade dysplasia.