

# Endoscopic treatment for Barrett's esophagus... it is not an easy choice

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Barrett's esophagus (BE) is a chronic gastroesophageal reflux complication which is considered to be the primary risk factor in the development of dysplasia and adenocarcinoma (1-3). This is why a special interest has developed in the last few years in endoscopy for treatment of high grade dysplasia and cancer associated with BE (4-7).

Nevertheless, the decision to treat endoscopically requires an adequate diagnosis. Unfortunately, at this point in time there are still flaws and contradictions in the very diagnosis of BE. Appearance in the endoscope is not enough. In addition the endoscopist must adequately identify the gastroesophageal and the squamocolumnar junctions and obtain an appropriate biopsy. Similarly, histologic confirmation of the presence of specialized intestinal metaplasia in the distal esophagus is needed (8, 9). Histologic diagnosis also faces other problems, since there are differences among gastrointestinal pathology experts regarding the identification of high degrees of dysplasia (10).

We will now talk about the diagnostic difficulties from the endoscopic point of view and the tools we endoscopists use to identify BE. With the coming of high resolution endoscopic videos (>800,000 pixels) it is possible to detect, with at least 80% precision, dysplastic injuries and neoplasias in BE (11). However, in order to achieve this, a meticulous observation for subtle abnormalities using Prague Qualification (12) is needed in order to determine the extension of metaplastic tissue. If a lesion is identified, it must be catalogued according to the Paris Consensus (9).

To improve the visualization of lesions, they may be irrigated with either water or acetic acid as described by Dr. Guelrud (13). The use of dyes such as methylene blue or carmine indigo does not increase detection of a high grade dysplasia or cancer, but they do allow for better demarcation of these lesions. The types of high resolution equipment currently in use have additional modes to improve images. These include NBI (Narrow Band Imaging), FICE (Fuji Intelligent Color Enhancement) and i-Scan (Image Enhancement). Although they do not improve detection of neoplastic lesions, if used well they do allow for better visualization and characterization of these lesions which is very important for preparing for endoscopic therapy.

Recently, there has been a large amount of interest in endoscopic treatment of high grade dysplasia and superficial cancer associated with BE. The techniques currently in use which show promising results are mucosectomy and radiofrequency ablation.

Similar results are obtained using either TxHood or band ligation mucosectomy. These techniques, despite being fairly safe, are not exempt from risks and must be performed by expert endoscopists. Even when the results with these techniques are good,

it is necessary to emphasize that good case selection must be performed. Special attention must be paid to size, since lesions greater than 1.5 cm cannot be removed in a single piece and require piecemeal resections which are associated with higher numbers of recurrences. Similarly, circular resections have a greater incidence of stenosis (14-16).

Complications associated with mucosectomies include bleeding, perforation and stenosis.

Bleeding may present itself after resection in 5% to 18% of cases depending on the series. However, arterial bleeding is unusual (17, 18). Hemostasis with sclerosing solutions and adrenalin is generally effective. Perforations have been observed in 0% to 2.5% of the cases. They can be managed endoscopically if identified early (18, 19). On the other hand, radiofrequency ablation has demonstrated its use in the eradication of BE. Nevertheless this technique has several inconveniences including high cost and the impossibility of obtaining material for histologic study. It is also associated with complications such as stenosis, subepithelial Barrett's Esophagus and perforation (20, 21).

In conclusion, the diagnosis of Barrett esophagus is not easy. A careful examination using high resolution equipment and enhanced endoscopic vision is needed. Close collaboration with the pathologist is also necessary in order to come to a precise diagnosis and decide upon endoscopic therapy. Once this treatment is chosen, it must be performed by expert endoscopists. The endoscopist must always be alert to possible early diagnoses and later to the need for treatment of complications.

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