

Observations of different patterns of Dysplasia in Barrett's Esophagus - a first step to harmonize grading

Michael Vieth¹*, Elizabeth A Montgomery²*, Robert H Riddell³

*These authors share first authorship having contributed equally to the work

¹ Institut für Pathologie, Klinikum Bayreuth GmbH, Bayreuth, Germany

² Johns Hopkins Medical Institutions, Baltimore MD, USA

³ Dept. of Pathology & Laboratory Medicine, Mount Sinai Hospital, Toronto Ontario, Canada

SUMMARY

We reviewed a set of cases of early neoplasia (low grade / high grade dysplasia / IEN and mucosal carcinoma) to reach better defined criteria for subtypes of dysplasia/differentiation in the columnar lined (Barrett's) esophagus. We discuss criteria that we categorized for recognizing low and high-grade dysplasia and mucosal carcinoma in patterns of neoplasia that we regarded as intestinal, gastric and mixed.

Keywords: Barrett – neoplasia – dysplasia – criteria – histomorphology – carcinoma

Rozlišování různých typů dysplazie v Barrettově jícnu - první krok k harmonizaci gradingu

SOUHRN

Revidovali jsme sérii případů časně neoplazie (low grade / high grade / IEN a intramukózní karcinom) s cílem lépe definovat kritéria pro subtypizaci dysplazie / diferenciaci v Barrettově jícnu.

Klíčová slova: Barrett – neoplazie – dysplazie – kritéria – histomorfologie – karcinom

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Evaluating dysplasia (intraepithelial neoplasia), and distinguishing it from the earliest signs of intramucosal carcinoma in the gastrointestinal tract, is problematic due to a combination of both inter- and intraobserver variations, differences in criteria and terminology, and also because different pathways exist in different organs. Other than those in the large bowel, these have not been well characterized. Barrett's epithelium is particularly notable in this respect, as it includes intestinal, gastric and mixed pathways, but these various phenotypes have never been fully characterized. Until this occurs, it is impossible to utilize a workable grading system as the criteria cannot be the same for each pathway. In the large bowel this difficulty was apparent in the setting of colitis-associated dysplasia/intraepithelial neoplasia in 1983 (1) and confirmed in Barrett's mucosa in subsequent studies in 1988 and 2001 (2,3). Efforts to refine diagnostic criteria (2,4,5) are limited by several factors. Specifically, early neoplastic lesions have tended to be evaluated as a continuum rather than in specific pathways, or combinations of pathways. Different observers have different thresholds for

evaluating biopsy features, and likely differ between biopsy and resection specimen, as the context and extent of disease makes it much easier to evaluate in larger specimens. Thus, the threshold to diagnose intramucosal carcinoma is, in general, higher in a biopsy than in a resection specimen especially in Western countries.

It is also apparent that pathologists use different thresholds for defining invasion into the lamina propria (6). This is also an issue that has been of interest in gastric lesions (7-12) but is important in both gastric lesions and in Barrett's esophagus with advances in both endoluminal imaging (13,14) and endoscopic treatments (15-17).

For all of these reasons, we see an increasing need for harmonization so that outcome studies are internationally interpretable. While endoscopic resection/endoscopic submucosal dissection treatment in BE was not accepted in the USA as readily as it was in Europe, it is now considered the standard of care for Barrett's-associated early neoplasia (high-grade dysplasia and early invasive carcinomas) in the USA (18). For low grade dysplasia, many observers argue that since low grade dysplasia can be found at the edge of higher grade lesions, it is also reasonable to manage low-grade dysplasia by endoscopic resection if a lesion is endoscopically visible (19). Previously esophagectomy was considered appropriate treatment for high-grade dysplasia.

Since most mucosal neoplasms are associated with a favorable outcome (15-17), a large number of cases assessed similarly will be required to determine which prognostic features are valid regarding recurrence, but our ability to compare studies

✉ Address for correspondence:

Dr. Elizabeth A Montgomery
Johns Hopkins Medical Institutions
Weinberg 2242, 401 N Broadway
Baltimore MD 21231, USA
tel: 410-614-2308
e-mail: emontgom@jhmi.edu