Endoscopic biopsies

The diagnostic reliability of endoscopic biopsies in diagnosing colitis

R Fiocca, P Ceppa

Endoscopic biopsies from the gastrointestinal tract form a large proportion of the specimens that are analysed in pathology units, and at present inflammatory lesions outnumber neoplastic diseases in endoscopic biopsy material. A large bulk of evidence supports the use of colonoscopic biopsies as an essential step in the diagnostic work up of inflammatory bowel diseases. Because no single pathognomonic lesion has been identified to date for the most common forms of colitis, the diagnosis usually derives from a complex evaluation of multiple elementary lesions and their topographical distribution. Few studies have analysed in detail the reliability and/or reproducibility of the histological changes that are used to distinguish inflammatory bowel disease from other forms of colitis, and Crohn’s disease (CD) from ulcerative colitis (UC).

The observed absence of differences in the diagnostic performance between experts and non-experts is intriguing and warrants further comment. The paper by Bentley et al implies that specialisation in pathology is not very useful, at least in terms of increasing the diagnostic performance. This contrasts with the growing worldwide trend towards a subspecialisation in surgical pathology. Most pathologists feel that an important difference does exist between experts and non-experts in terms of “real” diagnostic efficacy. This is why most major centres assign a specialised pathologist to GI tract diseases. In our opinion, there are some points that make the context of an international workshop different from routine diagnostic practice, and which could help us to understand why no differences were seen between experts and non-experts.

With regard to GI endoscopic biopsies, a great improvement in the diagnostic performance can be achieved by positive interaction between gastroenterologists and a dedicated pathologist. This interaction usually provides the pathologist with more complete clinical and endoscopic information. As a rule, the dedicated GI pathologist makes arrangements with the clinician regarding the most suitable biopsy sampling and frequently uses a standard report for assessing the features of colorectal biopsies. Comprehensive guidelines for reporting the diagnostic features of inflammatory bowel diseases have been published recently. As far as other colorectal diseases are concerned, the use of standard reports or checklists proved to be the most important corrective factor ensuring that all predictive histopathological parameters are fully reported. The differences between expert and non-expert pathologists

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apply to common, everyday diagnostics, and refer to organisational activities that cannot be reproduced in the context of an international workshop, where all pathologists are provided with the same information and biopsy sampling. We believe these points make an important difference.

The degree of personal motivation for non-expert pathologists in the environment of an international workshop is probably higher than would be found in routine practice. An increase in interest and attention would probably have a considerable positive impact. Moreover, in the paper by Bentley et al., even non-experts were asked to define the histological features that they thought were important for diagnosis. It is probable that all experts have a clear idea about what they personally believe are the most important diagnostic criteria. Briefly, we think that the environment of an international workshop increases the diagnostic performance of non-experts compared with their everyday diagnostic practice.

The participants in the workshop were asked to provide a definite diagnosis and to describe the criteria they followed to reach their diagnosis. The workshop rules did not allow for generic diagnoses, such as “chronic, non-specific inflammation”, which are still frequently being used by non-experts in their daily practice. As rightly emphasised by Tsang and Rotterdam, the lack of a definite diagnostic conclusion is a weak point in many diagnoses provided by non-experts.

In the study by Bentley et al., expert GI pathologists correctly identified 64% of CD and 74% of UC cases. These figures may be considered discouraging, at least with regard to the individual patient. However, these figures refer to one single, initial diagnosis and are based exclusively on the histological findings. In reality, the diagnosis of colitis derives from an integrated evaluation of clinical, endoscopic, and histological findings. Moreover, definitive diagnosis may require time, patience, and further follow up examinations. Taken together, an integrated approach increases the overall accuracy rates and make the clinico-pathological diagnosis of colitis much more reliable.


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