Advances in research

CD1a: a novel biomarker for Barrett’s metaplasia?

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By use of an immunoperoxidase-based staining assay we investigated the presence of CD1a—a T-cell antigen-presentation protein—in 113 oesophageal biopsy samples taken from patients with Barrett’s metaplasia. 84 of the patients had undergone biopsy once before and had been given a histological classification of either gastric or intestinal type metaplasia. The remaining 29 patients had undergone biopsy more than once; histological assessment confirmed diagnosis in 16 of these, but the metaplasia of 13 patients had evolved to dysplasia and neoplasia over time. Biopsy samples taken from 63 (75%) of the once-only biopsy group were positive for CD1a (41/54 patients with gastric type disease, figure a; 22/30 patients with intestinal type disease, figure b) although mucosae from normal stomach and colon tissue was negative for CD1a in both groups (figure c and figure d, respectively). In the multiple-biopsy group, 15/16 patients who had had their diagnosis confirmed were positive for CD1a (data not shown), whereas only 1/13 with dysplastic or neoplastic tissue were positive (figure e, dysplastic sample and figure f, Barrett’s adenocarcinoma).

We are unable to explain why CD1a is positive in Barrett’s metaplasia and not in normal epithelium, but the presence of this marker in neoplastic tissue may, if confirmed by prospective studies, become a useful diagnostic and prognostic tool indicating a favourable outcome in disease progression.

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