Endoscopic Features of Low Grade Dysplasia on Forceps Showing Upgraded Histology after Resection

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Background/Aims: Around 30~50% of histological diagnosis from endoscopic forceps biopsy for gastric dysplastic lesion has changed after endoscopic resection (ER). This study was aimed at identifying the predictive endoscopic features of high-grade gastric dysplasia (HGD) or early gastric cancer (EGC) after ER, which was initially diagnosed as low-grade dysplasia (LGD) on forceps biopsy.

Methods: From July 2005 until May 2009, 241 LGD lesions diagnosed by initial endoscopic forceps biopsy were enrolled and underwent ER. After ER, all lesions were categorized as two groups based on final histological findings: upgraded histology (UH: LGD to HGD or EGC) and concordant histology (CDH). As a predictive variables for UH, the size, gross endoscopic appearance, and location of the dysplastic lesion, and surface irregularity or redness, presence of depressed portion, numbers of forceps biopsy specimens, presence of Helicobacter pylori or intestinal metaplasia were investigated.

Results: Among 241 LGDs diagnosed by initial forceps biopsy, 100 lesions (41.5%) revealed histological discrepancy after ER; HGD in 56 (23.2%), adenocarcinoma in 39 (16.2%), and chronic gastritis in 5 (2.1%) patients. Therefore, 39% of initially diagnosed LGDs on forceps biopsy, was categorized as UH after histological examination of resected specimen. In univariate analysis, the larger lesion (>15 mm, p<0.05), the lesion with depressed portion (p<0.05) and the lesion with surface nodularity (p<0.05) were significantly related to more UH group after ER. In the multivariate analysis, larger size (>15 mm, OR 2.4; 95% CI 1.28-4.45, p<0.05) and depressed portion (OR 2.7; 95% CI 1.44-5.06, p<0.05) were predictive factors for UH after ER.

Conclusions: Even if endoscopic biopsy showed LGD, additional endoscopic resection should be preferentially considered in lesions larger than 15 mm in size, with depressed portion, and with surface nodularity.