Factors Related to Lymph Node Metastasis and Feasibility of Endoscopic Resection for Treating EGC

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Background/Aims: Endoscopic resection (ER) has become an alternative treatment for selected cases of early gastric cancer (EGC). With the accumulation of surgical data for EGC, the criteria for ER of EGC have been expanded in Japan. However, its wide acceptance is still being limited. In this study, we aimed to identify the risk factor associated with the lymph node metastasis (LNM) in mucosal EGC and EGC with invasion into the upper third of the submucosa (sm1). Validating expanded criteria of ER was another aim.

Methods: From April 2004 to December 2007, 1005 consecutively enrolled surgical specimens of EGC were reviewed and their clinicopathological factors associated with LNM were assessed. Also, EGC was divided into mucosal tumor (n=814) and sm1 invasion tumor (n=191).

Results: LNM was detected in 52 cases (5.2%); mucosal tumor (25/814, 3.1%) and sm1 tumor (27/191, 14.1%). In univariate analysis, tumor size, histology type, microscopic ulcers, venous invasion, lymphatic invasion and presence of submucosa invasion showed significant association with LNM in EGC. In multivariate analyses, perineural invasion (p=0.048), microscopic ulcers (p=0.001) and lymphatic invasion (p=0.000) were identified as independent risk factors for LNM. In both mucosal and sm1 invasion EGC group, microscopic ulcer and lymphatic invasion were independent risk factors. The presence lymphatic involvement was the strongest predictive factor for a LNM, being observed in 54% of cases in which a LNM had been revealed. No LNM was found in EGCs with sm1 invasion regardless of histology if they were <2 cm and without lymphatic invasion. Also, in mucosal EGC with ulceration, no LNM was observed if tumor size were <2 cm. 241 cases met the expanded criteria for ER and 5 cases (2.1%) showed LNM.

Conclusions: Endoscopic resection might be considered as a treatment option for EGC with selective cases such as 1) size <2 cm with sm1 invasion and no lymphatic invasion 2) ulcerative mucosal tumor less than 2 cm.

색인단어: Early gastric cancer, Lymph node metastasis, Endoscopic mucosal resection, Expanded criteria

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