**Is endoscopic submucosal dissection of superficial spreading early gastric cancer safe?**

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**Introduction:** Endoscopic submucosal dissection is an alternative modality of surgery in early gastric cancer (EGC). The size of EGC is not a limitation of endoscopic treatment, but there are few data on reasonable endoscopic treatment of superficial spreading EGC. The aim of this study was to investigate the rate and risk factors of lymph node metastasis of superficial spreading EGC for establishing proper criteria of endoscopic treatment of superficial spreading EGC.

**Methods:** Between 2000 and 2010, the patients who received curative surgery due to early gastric cancer in Severance Hospital, Seoul, Korea were enrolled. The tumors were divided into two groups by size of 6 cm. Superficial spreading EGC was defined as the largest lesion ≥ 6 cm.

**Results:** Of 2,758 EGC lesions, 105 (3.8%) lesions had a size of ≥ 6 cm, and 2653 (96.2%) lesions had a size of <6 cm. Tumor size ≥ 6 cm had higher rate of submucosal cancer 60.0% vs. 46.1%, P = 0.005), lymphovascular invasion (25.7% vs. 12.7%, P < 0.0001), and lymph node metastasis (18.1% vs. 10.9%, P = 0.22) than <6 cm EGC. In the multivariable analysis, the odd ratio of tumor size (≥ 6 cm) was 1.28 (95% confidence interval, P = 0.388) for lymph node metastasis without statistical significance. In 105 patients with tumor size ≥ 6 cm, the rate of lymph node metastasis was higher in submucosal cancer than in mucosal cancer (25.4% vs. 7.1%, P = 0.017). The lymph node metastasis was significantly associated with lymphovascular invasion.

**Conclusion:** Superficial spreading EGC (tumor size ≥ 6 cm) was not associated with an increased risk of lymph node metastasis. This finding suggests that superficial spreading EGC become a candidate of endoscopic treatment as EGC < 6 cm.