Additional Gastrectomy after Non-Curative Endoscopic Submucosal Dissection for Early Gastric Cancer

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Endoscopic Submucosal Dissection (ESD) is widely accepted as one of the treatment options for early gastric cancer (EGC) with negligible risk of lymph node metastasis by improvement in techniques and endoscopic devices. In addition, oncologic outcomes of ESD for EGC have been proved comparable with standard gastrectomy.¹⁻⁴ According to Japanese Gastric Cancer Treatment Guidelines,⁵ ESD is recommended only for patients who meet the criteria (absolute and expanded) due to risk of residual cancer and lymph node metastasis. Curative ESD is defined as: En-bloc resection, negative lateral and vertical resection margin, no lymphovascular invasion and (a) tumor size >2 cm, differentiated, pT1a without ulcer or (b) tumor size ≤3 cm, differentiated, pT1a with ulcer or (c) tumor size ≤2 cm, undifferentiated, pT1a with ulcer or (d) tumor size ≤3 cm, histologically of differentiated, pT1b (SM1, <500 micron from the muscularis mucosae) by pathologic findings. Resection that does not satisfy any of the above criteria is considered non-curative.⁵

Additional surgery is usually performed for patients with non-curative ESD. But necessity of additional gastrectomy after non-curative ESD is still controversial. There are reports which suggest that close observation might be acceptable for

some selected patients^{6,7} and others reported the needs and survival benefit of additional surgery depending on margin involvement, histologic type and lymphovascular invasions.⁸⁻¹¹ Careful consideration should be given regarding patients' age, conditions and underlying diseases in the selection of ESD and surgery.^{9,12}

ESD makes large iatrogenic ulcer with electric coagulation and it takes more than 4~8 weeks for healing. This ulcer can cause edema, fibrosis and adhesions of both stomach and surrounding tissues. Therefore ESD may increase surgical difficulties for additional gastrectomy as well as the risk of complications.¹³ This study showed no significant influence of ESD on additional gastrectomy. Several studies¹⁴⁻¹⁶ support similar results but also point that adhesion may result in difficult surgery and greater blood loss, and intended operative procedure can be changed due to contraction of the ESD scar near pylorus or cardia.^{13-15,17}

As all we know, laparoscopic gastrectomy has become standard treatment for early gastric cancer. Laparoscopic gastrectomy with adequate lymph node dissection can be safely applied for patients with non-curative ESD regarding postoperative complications and oncologic outcomes.^{14,16}

Authors compared the early postoperative outcomes according to the interval between ESD and additional gastrectomy. No established principal exists regarding ideal timing of surgery after ESD. We can refer to the result of one study which reported that about 1 month after ESD might be optimal for better surgical results without affecting the oncological outcomes.¹³

Finally, it is important to select the patients with non-curative ESD for additional gastrectomy according to the risk of residual cancer and lymph node metastasis. Also, the surgeon have to keep in mind that scar and surrounding fibrosis of previous ESD can worsen the postoperative outcome and to secure sufficient safety margin from the lesion.

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