Letter to the editor

Result of an endoscopic mucosal resection demonstrated at the International Gastric Cancer Congress in New York

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To the Editor:

At the opening ceremony of the fourth International Gastric Cancer Congress, held in New York in May 2001, we had the opportunity to demonstrate, via satellite transmission live from Tokyo, a new procedure of endoscopic mucosal resection (EMR) for early gastric cancer. Fortunately, and to the great relief of our colleagues anxiously watching the platform screen in New York, the EMR went smoothly and the resected specimen was retrieved from the patient's stomach in full view of the large audience.

We believe it is our obligation to report the histological findings of the specimen and the subsequent clinical course of the patient.

The patient, a 69-year-old man, was admitted on the day of the demonstration. The lesion was a 2-cm reddish depression on the anterior wall of the lower gastric body (Fig. 1). The biopsy revealed well-differentiated adenocarcinoma, and the depth of invasion was endoscopically estimated as T1 limited to the mucosal layer. Based on these findings, EMR was determined to be the best therapeutic option for him, as the risk of lymph node metastasis was low [1].

After indigocarmine spray marking was done to contrast the minute mucosal structure, we performed EMR, using an insulation-tipped electrosurgical (IT) knife [2] (Figs. 2–9). The procedure between the marking (Fig. 2) and resection (Fig. 8) took 15 min. Endoscopy on the following day confirmed no bleeding or perforation. The patient fasted for 48 h and was discharged on the fifth day without any complication. Recently we performed endoscopy for his 12-month follow-up that revealed only an ulcer scar.

Histological examination of the resected specimen showed that the tumor was confined to the mucosal

layer without lymphatic or vascular capillary involvement (Figs. 10, 11). The resection lines, both vertical and lateral, were free of cancer invasion. The resection was thus considered to be curative both clinically and histologically.

EMR has become an important treatment option for early gastric cancer in Japan [3]. The gastric cancer treatment guidelines issued by the Japanese Gastric Cancer Association (JGCA) in 2001 clearly defined the criteria for EMR [4]. The endoscopic technique varies among different institutions, and our IT knife method is suitable for the resection of large tumors or those with an ulcerative component. The JGCA criteria for EMR are quite strict, and the possibility of their expansion is a current topic among Japanese endoscopists. We believe that more patients with gastric cancer will benefit from this noninvasive method in the future.

References

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Fig. 1. Reddish depression on the anterior wall of the lower gastric body

Fig. 2. Marking dots on the circumference of the lesion after indigocarmine spraying

Fig. 3. Injection of saline with epinephrine (0.025 mg/ml) into the submucosal layer around the lesion to lift it off the muscle layer

Fig. 4. Insertion of the tip of the insulation-tipped electrosurgical (IT) knife into the submucosal layer through the initial incision

Fig. 5. Using END-CUT mode (ERBE ICC 200, Germany) to cut the mucosa

Fig. 6. Complete separation from the surrounding non-neoplastic mucosa

Fig. 7. Resection using standard snare polypectomy

Fig. 8. Complete resection without major complications

Fig. 9. The resected material, which is 45 mm in diameter pinned on a flat cork

Fig. 10. Depressed (IIc) type intramucosal cancer that is 20 mm in size. (H&E, ×4)

Fig. 11. Well-differentiated adenocarcinoma with high-grade atypia. (H&E, ×40)