

Polyglycolic acid sheet application to prevent esophageal stricture after endoscopic submucosal dissection for esophageal squamous cell carcinoma.

Authors: Iizuka T., Kikuchi D., Yamada A., Hoteya S., Kajiyama Y., Kaise M.

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Abstract:

Background and study aim: Esophageal stricture following endoscopic submucosal dissection (ESD) can be a serious complication in patients with large mucosal defects. This preliminary study examined the efficacy of using a polyglycolic acid (PGA) sheet with fibrin glue for the prevention of esophageal stricture after ESD. Patients and methods: A total of 15 patients were enrolled. After resection, PGA sheets were placed over the surgical wound. The size of the mucosal defect was estimated by dividing the circumference of the esophagus into 12 parts of equal size. The occurrence of esophageal stricture at 6 weeks, along with the proportion of patients who had PGA sheet remaining in place 1 week and 2 weeks after ESD, and the occurrence of adverse events were investigated. Results: The size of mucosal defects in the 15 patients were 7/12 ($n = 4$), 8/12 ($n = 5$), 9/12 ($n = 4$), 10/12 ($n = 1$) and 11/12 ($n = 1$). Esophageal stricture occurred in 1/13 patients (7.7 %; two patients were not included in the analysis because they had required surgical resection during the follow-up period). The PGA sheet remained at 1 week after ESD in 13/15 patients (86.7 %) and at 2 weeks after ESD in 6/15 patients (40 %). No adverse events were observed. Conclusion: PGA sheets may have the potential to prevent esophageal stricture.