**Absence of the Nonextension Sign as a Marker for Endoscopic Submucosal Dissection Suitability**

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**ABSTRACT**

**Background**: Early gastric cancer (EGC) is defined as gastric cancer confined to the mucosa or submucosa, irrespective of lymph node metastasis. Successful curative resection of a superficial lesion can only be achieved by precise characterization of the lesion. Endoscopic submucosal dissection (ESD) is a standard treatment of EGC. Postoperative results for EGC are excellent, with a 5-year survival ratio of over 90%. We report a case of EGC in which the absence of a nonextension sign was used, achieving en bloc R0 resection.

**Case Report:** A 64-year-old Costa Rican woman with hypertension, grade 2 obesity, and diabetes

underwent screening endoscopy in which a 30 mm elevated, Paris 0IIa + IIc lesion was identified at the antrum, with a demarcation line and irregular vascular and surface pattern. Owing to size and morphology, depth extension was unclear, for which the absence of the nonextension sign was used to decide for on-site ESD. Subsequently, the patient underwent an ESD, achieving en bloc resection. The biopsy specimen was sent for histopathology, which confirmed gastric adenocarcinoma pT1a with lamina propria and muscularis mucosae invasion, but with tumor-free resection margins. During the postprocedural course, the patient had hematemesis; an endoscopic evaluation identified a spurting vessel located at the ulcer center. Endoscopic treatment using coagrasperwas achieved with successful hemostasia. The patient received esomeprazole intravenously and sucralfate per oral for 5 days, when a second look endoscopy was performed and no lesions were observed. The patient was discharged home.

**Discussion:** Endoscopic diagnosis of EGC using conventional endoscopy is challenging because it often shows only subtle changes on endoscopic examination. Determining the depth of invasion, is important when considering therapeutic strategies. The nonextension sign requires adequate gastric distension and consists of a protrusion of the surrounding mucosa into the lumen, creating a trapezoidal shape in the gastric wall. This phenomenon occurs when massive submucosal invasion by a cancer increases the thickness and rigidity of the gastric wall and may be useful to differentiate between mucosal or microinvasive submucosal (SM1) and invasive submucosal (SM2) cancers.

**Conclusion:** Validation of the nonextension sign is necessary through prospective studies; however, we present a successful application in on-site decision making with a successful result.

**BIOGRAPHY**

Aldo Carvajal González is a young gastroenterologist from a low-income country, very interested in the field of therapeutic endoscopy. Using the absence of the nonextension sign, previously described by the Japanese, this case report is an example of a very practical approach in decision making for the endoscopic submucosal dissection suitability, and has the advantage that is performed by conventional endoscopy, reducing costs and needs of advanced equipment, who could be a limitation in many countries of Latin America.

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