

Endoscopic mucosal ablation: a novel technique for a giant nonampullary duodenal adenoma

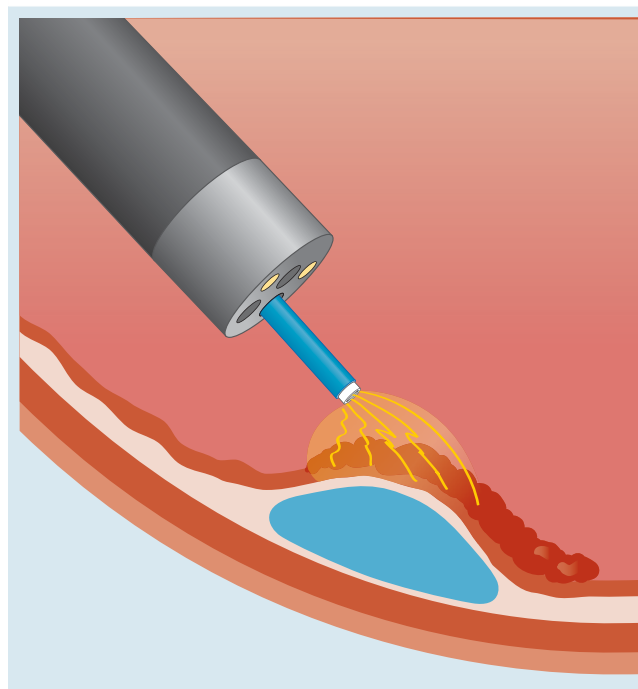


Fig. 1 Endoscopic mucosal ablation (EMA) technique: submucosal fluid injection is followed by high power argon plasma coagulation (APC) tissue ablation.

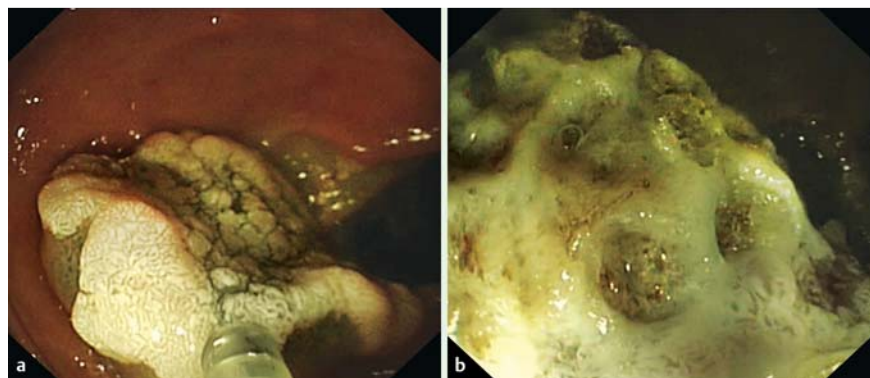


Fig. 2 Endoscopic appearances during endoscopic mucosal ablation (EMA) showing: **a** the submucosal lift injection; **b** the honeycomb appearance following ablation.

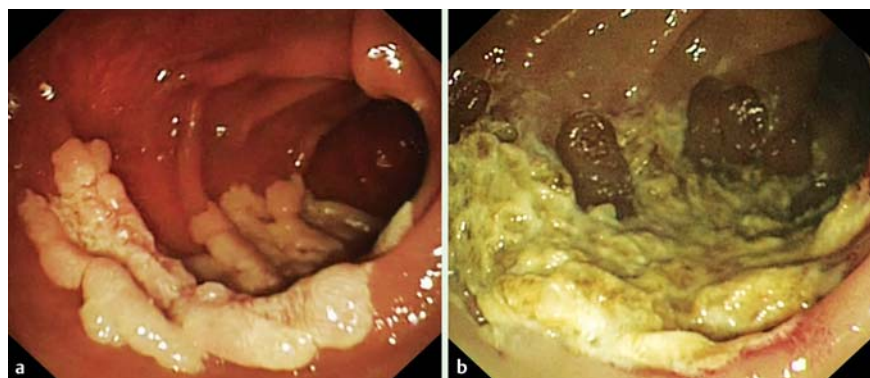


Fig. 3 Endoscopic images of: **a** the nonampullary duodenal polyp before the endoscopic mucosal ablation (EMA); **b** the final post-EMA defect.

Piecemeal endoscopic mucosal resection (p-EMR) for large sessile or flat duodenal polyps results in a high incidence of bleeding [1]. A novel injection and ablation technique, endoscopic mucosal ablation (EMA), was used to eradicate a benign sporadic nonampullary duodenal adenomatous polyp. EMA comprises two conventional modalities: submucosal fluid injection followed by high power argon plasma coagulation (APC) tissue ablation (● Fig. 1). The fluid-filled submucosal cushion absorbs thermal energy and protects the underlying thin duodenal muscle layer; providing a heat-sink effect [2,3]. The entire mucosal layer progressively “melts” with lateral propagation of the thermal energy within the duodenal submucosal layer giving a macroscopic appearance of a honeycomb (● Fig. 2) [4]. A hemircumferential, 45-mm, nongranular lateral spreading tumor was identified in the postampullary segment of the duodenum in a 76-year-old woman. A pediatric endoscope (LUCERA PCF240DL; Olympus KeyMed, Southend-on-Sea, UK) was used to achieve stable access for the endoscopic therapy. The polyp was scrutinized with narrow band imaging (NBI) and was seen to have a benign vascular and crypt pattern (type IV). The lesion was lifted entirely with submucosal injection of 25 ml diluted adrenaline (1/200 000) mixed with methylene blue. Representative polyp pieces were removed by p-EMR using a 10-mm snare (SnareMaster kit, Olympus KeyMed). EMA was finally applied to the remaining 90% of the polyp using high power APC of 45 W, on forced coagulation and a flow rate of 2 L/minute (ICC 200 and APC 300; ERBE, Tübingen, Germany), until no visible viable polyp was observed (● Fig. 3; ● Video 1). The time required to complete the destruction of the polyp was 13 minutes. Histological analysis showed a tubulovillous adenoma with low grade dysplasia. The patient was discharged the following day on a 2-week course of proton pump inhibitors.

No intraoperative or delayed complications occurred. At the 6 month check, both NBI and indigo carmine (0.1%) dye assessment revealed a completely healed

Video 1

Endoscopic mucosal ablation (EMA)-assisted polypectomy in a giant nonsporadic duodenal adenoma and the outcome at the 6-month follow-up examination.

scar with a tiny 4-mm area of residual polyp that was treated with EMA.

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Competing interests: None

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