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

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 hemicircumferential, 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 45W, on forced coagulation and a flow rate of 2L/minute (ICC 200 and APC 300; ERBE, Tübingen, Germany), until no visible viable polyp was observed (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 intraprocedural or delayed complications occurred. At the 6 month check, both NBI and indigo carmine (0.1%) dye assessment revealed a completely healed...
scar with a tiny 4-mm area of residual polyp that was treated with EMA.

**Endoscopy_UCTN_Code_TTT_1AO_2AF**

**Competing interests:** None

**Z. P. Tsiamoulos¹, S. T. Peake¹, L. A. Bourikas², B. P. Saunders¹**

¹ Wolfson Unit for Endoscopy, St Mark’s Hospital and Academic Institute, London, UK
² Department of Gastroenterology, University Hospital of Heraklion, Crete, Greece

**Acknowledgment**

The authors would like to acknowledge the assistance of Mr. Stephen Preston, BA, multimedia consultant, in editing the images and video clip.

**References**


**Bibliography**

DOI http://dx.doi.org/10.1055/s-0032-1326117

Endoscopy 2013; 45: E12–E13

© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

**Corresponding author**

Z. P. Tsiamoulos, MBBS

Wolfson Unit for Endoscopy
St Mark’s Hospital and Academic Institute
London
HA1 3UJ, UK
Fax: +44-208-8692936
ztsiam@otenet.gr
ztisamoulos@nhs.net