Residual Rectal Adenoma with pCLE Confirmation and Real Time Treatment

Case Study

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1. Technology review

Probe-based Confocal Laser Endomicroscopy (pCLE) is a new method that provides microscopic views of the mucosa. Images are obtained by scanning the mucosal surface with a low power laser light that is passed through a fiber optic bundle. This technology makes it possible to image individual cells and tissue architecture, allowing the endoscopist to make a diagnostic assessment of the histology real-time, *in vivo.*

Figure 1 : endoscopic view of residual nodules line

2. Case report

An 82-year-old man was seen for a 6-month follow-up sigmoidoscopy due to a previous history of large sessile tubulovillous adenoma at the dentate line that had been snared and ablated with serial argon plasma coagulation (APC) sessions.

Nodular mucosa was found in the rectum (figure 1). Two 2 mm nodules were identified just above the dentate line. On i-Scan (Pentax) exam, mucosal pit pattern was abnormal however, no clear pit pattern suggestive of adenoma was seen. pCLE was performed after intravenous injection of fluorescein(2,5ml, 10%) using the GastroFlex confocal mini-probe. After positioning the tip of the probe on the mucosa, pCLe images were obtained in real time and dark, uniform cells suggesting the presence of residual adenoma were seen (figure 2). Biopsies were obtained from the same areas. The nodular areas were then ablated using APC (figure 3). Biopsy results showed fragments of tubular adenoma. Repeat exam 4 months later demonstrated no residual adenoma.

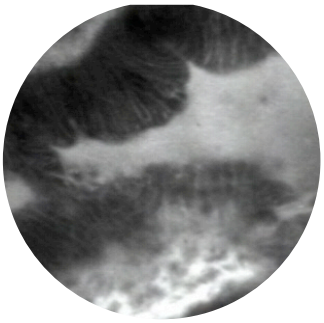

Figure 2 : pCLE image featuring criteria suggestive for residual adenomas

3. Summary

pCLE enabled the physician to assess in real time the true nature of suspicious nodules that remained unclear based on routine techniques. The additional information provided by pCLE imaging during the procedure helped direct the treatment strategy for the patient and more accurately target and ablate residual adenoma in the same setting.

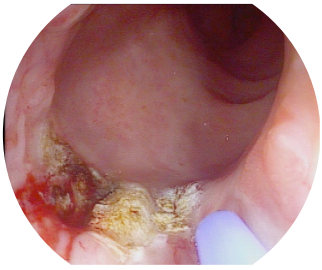

Figure 3 : APC ablation of the nodular area