

IMPROVED ENDOSCOPIC VISIBILITY WITH GEL VERSUS WATER IMMERSION DURING COLORECTAL UNDERWATER EMR: A RANDOMIZED CROSSOVER TRIAL

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Presentation

Colorectal

Endoscopy

Surgery

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A prospective randomized crossover trial (n=72 colorectal lesions) found that under-gel observation using Viscoclear® significantly improved lesion margin visibility compared to underwater observation during endoscopic mucosal resection, particularly in patients with suboptimal bowel preparation.

KEY POINTS

- Color difference (ΔE) between lesion and surrounding mucosa was significantly higher with gel versus water under white light imaging (median 12.4 vs 10.0, $p=0.01$) and blue laser imaging (median 21.1 vs 15.7, $p<0.01$).
- In subgroup analysis of cases with Boston Bowel Preparation Scale scores ≤ 2 , under-gel observation showed significantly higher ΔE in white light ($p=0.03$) and blue laser imaging ($p<0.01$), but no significant difference was seen when bowel preparation was optimal (score=3).
- En bloc resection was achieved in all 72 cases with a 90% R0 resection rate and no adverse events; mean gel injection volume was significantly lower than water volume.
- The study enrolled lesions 6-20 mm (median 8 mm) with histopathology showing 90.3% adenomas, 2.6% cancers, 4.1% traditional serrated adenomas, and 2.8% hyperplastic polyps.
- Gel immersion endoscopy may be a useful adjunct in difficult visualization conditions during colorectal underwater EMR, though the single-center open-label study did not directly evaluate the relationship between visibility and clinical outcomes.

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