A NOVEL PHYSIOLOGICAL ANALYSIS USING BLOOD FLOW VELOCITY MAY HAVE THE POTENTIAL TO DISTINGUISH COLONIC POLYPS: A PILOT STUDY

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A single-center retrospective study found that microvascular blood flow velocity measured by magnifying endoscopy was significantly lower in colorectal adenomas than in hyperplastic polyps or surrounding mucosa.

KEY POINTS

- The study analyzed 30 adenomas and 20 hyperplastic polyps using magnifying blue laser imaging to calculate mean microvascular blood flow velocity from 30-fps video by tracking red blood cell movement.
- Mean blood flow velocity was 1.65 mm/sec in adenomas, 2.83 mm/sec in hyperplastic polyps, and 4.12 mm/sec in surrounding mucosa, with adenomas significantly lower than both comparators ($p < 0.001$).
- The ratio of lesion to surrounding mucosa blood flow velocity was 0.41 in adenomas versus 0.89 in hyperplastic polyps ($p < 0.001$).
- The authors suggest these findings may support using microvascular blood flow velocity as a novel dynamic diagnostic tool to differentiate adenomas from hyperplastic polyps, though they note the small sample size and single-center design require validation.
- This work is relevant to endoscopists interested in novel magnifying endoscopy techniques for real-time polyp characterization.

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