

FEASIBILITY OF PHOTODYNAMIC ENDOSCOPIC IMAGING USING 5-AMINOLEVULINIC ACID FOR EARLY GASTRIC TUMORS

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Poster

Oesophagus

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Oral 5-aminolevulinic acid-mediated photodynamic endoscopic imaging detected 85% of early gastric neoplasms and identified additional synchronous lesions in an exploratory study of 54 patients.

KEY POINTS

- Photodynamic endoscopic imaging with oral 5-ALA (20 mg/kg) uses tumor-selective protoporphyrin IX fluorescence under 410 nm excitation to visualize gastric lesions with red fluorescence at approximately 635 nm
- The technique detected 51 of 60 known early-stage gastric lesions (85.0% detection rate) and newly identified 11 synchronous lesions in 8 patients (14.8%)
- All signet ring cell carcinomas (5 of 5) were fluorescence-negative, while 91.6% of post-H. pylori eradication gastric cancers (11 of 12) exhibited detectable fluorescence
- Adverse events were mild and self-limited, including transient liver enzyme elevations (9 cases), mild hypotension (1 case), and low-grade fever (1 case), with no phototoxic reactions under light-shielding protocols
- The authors conclude this molecular imaging approach may augment endoscopic screening for gastric adenomas and differentiated early cancers, though diffuse-type carcinomas may evade detection

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