

Percutaneous Endoscopic Sigmoidopexy for Recurrent Sigmoid Volvulus in High-Risk Patients: A Systematic Review

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Abstract

Background: Sigmoid volvulus is a potentially life-threatening condition, and standard surgical management poses significant risk in frail or comorbid patients, who may also be unfit. Minimally invasive alternatives such as percutaneous endoscopic sigmoidopexy (PES) have been proposed.

Objective: To systematically review the evidence on outcomes of PES in high-risk patients with recurrent sigmoid volvulus.

Methods: A comprehensive systematic search was performed according to the predefined protocol. Eligible studies included case reports, case series, and observational cohorts describing PES in adults with recurrent volvulus, particularly those deemed high-risk for surgery. Data on patients and study characteristics, techniques, and outcomes such as recurrence, adverse events and mortality were extracted.

Results: 10 studies were included out of 126, and these encompassed 26 patients. Techniques for fixation varied (T-fasteners, buried sutures, 2-shot anchors, endoscopic clips). Most patients were elderly with multiple comorbidities (ASA ≥ 3). Reported technical success was 100%. Recurrence at time of follow up (ranging 3–18 months) was rare, mortality was mostly unrelated to volvulus or procedure, and complications were generally minor. One procedure-related death was reported (Gallagher 2002).

Conclusion: PES appears to be a promising minimally invasive for managing recurrent sigmoid volvulus in high-risk patients, with markedly lower morbidity than conventional surgery, while delivering low recurrence rates. However, evidence is limited to small case reports and series. For PES' role to be solidified and adopted in widespread clinical practice, larger, more robust prospective studies are required.

Keywords

Sigmoid volvulus, percutaneous endoscopic sigmoidopexy, minimally invasive, systematic review.