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Aim: The aim of this review is to assess the strength of the available literature regarding the use of ERAS in ES and to identify areas in which improved outcomes have been reported.

Method: A comprehensive literature search was performed to identify existing published literature in addition to trials and research currently being undertaken. Databases searched included MEDLINE/PubMed; EMBASE and the Cochrane CENTRAL; ANZ Controlled Trials Registry; the Clinical Trials Database; the National Research Register; Current Controlled Trials and the NHS Centre for Reviews and Dissemination database. The four studies selected for inclusion in comparative outcome measurement all detailed assessment of the background details of their patient populations, with no significant differences in demographics being reported. No significant differences were reported in physiological assessment techniques performed on the patient groups. These techniques included: American Society of Anesthesiologists (ASA) grade, presence of major co-morbidity, Injury Severity Score (ISS) and Penetrating Abdominal Trauma Index (PATI) score.

Result: The studies selected three reported LoS data according to mean values with standard deviation figures, while a single study reported only a median figure without ranges. Combined means and standard deviation calculations were performed. Hedges' g formula was used to calculate effect size allowing for weighting according to the relative size of the sample populations. Effect size was calculated to be 0.89 for the combined LoS data (showing a large size of effect for this outcome). A single variable z-score calculation was then performed using the CC combined mean and standard deviation values as the background population figures. After calculating the background population variance figure the z-score and p-value were calculated for this outcome.

Conclusion: There remains a relative paucity of literature to support the use of ERAS protocols in ES despite their widespread utilization in the elective surgery setting. The current literature uses a variety of non-standardized outcome measures, with only M&M and LoS being consistent throughout the selected papers. Current evidence would support the benefit of reduced LoS, without any negative effect on M&M, for the use of ERAS protocols over conventional care in the ES setting.

Biography

Neil Lowrie is currently the Senior Resident in General Surgery at Southland Hospital and the University of Otago, New Zealand. Following completion of Primary Surgical Fellowships, he has obtained a Master of Surgery degree from the Royal College of Surgeons and Edinburgh University. Having gained experience in trauma surgery at Waikato Hospital in New Zealand, his experience and areas of interest are in trauma and acute care surgery. His Master's dissertation examines the utility and possible benefits of enhanced recovery protocols following emergency surgery.

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