

INTRODUCTION: Studies evaluating the value of purgative bowel preparation before small bowel capsule endoscopy have shown conflicting results. In this dual-centre, blinded, randomised controlled trial, we compared the effectiveness and tolerability of two polyethylene glycerol (PEG) purgative strategies against clear fluids only.

METHODS: Adult patients with suspected small bowel pathology from Sheffield (UK) and Ontario (Canada) were randomised into 3 groups: a split dose PEG (Group A: 1L at 7pm day -1 and 1L at 6am day 0), a single dose PEG (Group B: 2L at 6 am Day 0) or clear fluids only (Group C). Cleanliness was assessed overall and in small bowel quartiles using a physician-assessed overall assessment of adequacy (OAA), a quantitative index (QI), and a computed assessment of cleanliness (CAC). Patients completed a questionnaire on the clinical tolerance and acceptance of the different strategies.

RESULTS: A total of 269 patients (median age 50 years, 61.7% female) completed the study. The OAA was greater in group A and group B compared with group C (86%, 90%, and 71%, respectively; $p=0.02$). The QI of small bowel cleansing was higher in group A compared with group C ($p=0.01$) but was similar between groups B and C ($P=0.12$). The differences in OAA and QI between groups were only significant in the fourth quartile. There was no difference in the CAC between the three groups ($p=0.95$). Patients in group C reported better tolerability compared with groups A and B (76% vs 33.3% vs 44%; $p<0.0001$) and were more willing to undergo the procedure again if needed (97.4% vs 77.2 vs 82%; $p<0.0001$). There were no statistically significant differences between Groups A and B in any measure of cleanliness, nor tolerance and acceptability.

CONCLUSION: There are only marginal gains in small bowel cleanliness with purgatives compared with clear fluids only, mostly in the distal small bowel. The trade-off between slight improvement in distal small bowel visualisation and increased patient discomfort with purgatives should be weighed based on the specific clinical context and indication of capsule endoscopy.