



Mechanical bowel preparation and fasting may influence aerobic capacity in cardiopulmonary exercise testing

Aims

- To evaluate the effect of mechanical bowel preparation, Picolax® (Ferring Pharmaceuticals Ltd, Middlesex, UK), on aerobic exercise capacity as measured by CardioPulmonary Exercise Testing (CPET).

Introduction

- Major colorectal surgery may be associated with significant morbidity and mortality due to infectious complications and anastomotic dehiscence.
- Pre-operative Mechanical Bowel Preparation, MBP such as Picolax® (Ferring Pharmaceuticals Ltd, Middlesex, UK), has been widely used to prevent this.
- Recent meta-analyses and systematic reviews have questioned the need for MBP as it may confer no benefit and perhaps is associated with increased risk of anastomotic complications

Methods

- This is a single centre, blinded, randomised, prospective, controlled crossover trial carried out in a Colorectal Surgery Specialist Unit.
- Nine male volunteers, 27-50 yr, American Society of Anaesthetists (ASA) grade 1, each completed three CPET sessions several weeks apart.
- These tests comprised baseline ("BASE"), following mechanical bowel preparation ("MBP") and following preoperative carbohydrate loading as per Enhanced Recovery after Surgery ("ERAS") guidelines.
- Test sequence was randomized and the investigator blind to the condition of the volunteers.
- Oxygen consumption at Anaerobic Threshold (AT), and other relevant variables were routinely recorded.

Conclusion

- Mechanical bowel preparation and fasting may influence aerobic exercise capacity in healthy volunteers.

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