Hypothesis / aims of study
Antegrade colonic irrigation enema (ACIE) is established as an old treatment for child fecal incontinence and recently is approved as a treatment for different causes of adult fecal incontinence (cancer surgery, neurogenic bowel, spinal cord injury, sphincter trauma, etc.). Despite of benefits of emptying the colorectum and prevent fecal incontinence or constipation, this method is time consuming and requires thorough instruction and training.

The purpose of this study was to innovate and assess novel technique to decrease time consuming and improve performance of irrigation.

Study design, materials and methods
We designed an electromechanical pump for colon irrigation and assessed by a randomized crossover clinical trial study, involving two four weeks treatment phases. 30 patients were included that suffered fecal incontinence and had been managed with appendicostomy antegrade colon irrigation.

Results
Traditional mean toileting time was 67 minutes, versus pump-toileting time that was 24.6 minutes (PV: 0.00). The volume of water was reduced in 13 patients. Mean of volume was 1712 ml in traditional method and 1164 ml in pump method (PV: 0.279). Mean Cleveland Clinic Florida Fecal Incontinence score (CCF_FIS) for pump was 5.84 compare 6.24 for traditional method (PV: 0.000).

Interpretation of results
The results showed that the pump decrease time and volume of irrigation compared with traditional method. All patients had a reduction in toileting times.

Concluding message
Our study provides evidence for the first time that our novel method can facilitate and speed-up colon irrigation without any adverse effect on the outcome.

Disclosures
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