Hospital Practice

Enema or Picolax as preparation for flexible sigmoidoscopy?

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Summary: Two preparations for outpatient flexible sigmoidoscopy, Picolax and Klyx enemas, have been compared in a randomized controlled trial. There was no difference in efficacy between the two preparations, but patients preferred Picolax.

Introduction

The number of flexible sigmoidoscopies performed is increasing. In this unit 84 flexible sigmoidoscopies were performed in 1982 and 284 in 1987. Good views depend on adequate bowel preparation^{1,2} but there is no evidence from clinical trials as to what preparation is best. The ideal preparation must be well tolerated, provide satisfactory views for the endoscopist, and be suitable for outpatient use. We have compared the standard preparation (Klyx enema) with an oral preparation (Picolax).

Patients and methods

Thirty nine consecutive adult outpatients undergoing flexible sigmoidoscopy were studied. The sex ratio was 11 female/8 male in the enema group and 8 female/12 male in the Picolax group. The age ranges were 18–74 years (mean 56) in the enema group and 24–79 years (mean 57) in the Picolax group. The indications included anaemia (5), rectal bleeding (8), constipation (6), diarrhoea (10), removal of polyps (5) and assessment of colitis (5). Patients were randomly allocated to receive either 2 Klyx enemas (each containing docusate sodium 240 mg and sorbital 60 g in 240 ml) or 1½ sachets of Picolax by mouth (each sachet containing sodium picosulphate 10 mg and magnesium citrate 15 g) in 570 ml (½ pint) of water. (Two sachets of Picolax have been used as a routine preparation for colonoscopy,³ and so a smaller amount was used for this study.) Preparation was given 2 to 3 hours before the examination, the exact time depending on the size of the endoscopy list. There was no dietary restriction prior to the procedure.

The number of bowel actions between the preparation and the procedure was recorded. Patient tolerance was assessed by recording immediately before the procedure whether the preparation was painful and by a visual analogue scale of comfort. An experienced endoscopist, unaware of the preparation used, recorded whether the lumen of the bowel was empty, and whether the mucosa was obscured by mucus or stool. The percentage of mucosa seen was noted, and the endoscopist marked how satisfactory the view was on a visual analogue scale.

Results

Twenty patients received Picolax and 19 received Klyx enemas. The median number of bowel actions was 2 after Klyx enemas and 3 after Picolax. Significantly fewer patients in the Picolax group than in the enema group found the preparation painful (1/20 vs 7/19; $P = 0.035$; Fisher's exact test). The patients' visual analogue scale showed a significant preference for Picolax (median 80% vs 50%; $P < 0.02$; Mann-Whitney U test). The endoscopists found no significant difference between the effectiveness of the preparations. The median percentage of mucosa seen was 80% with Picolax and 90% with enemas, and less than 70% in only 3 patients. The endoscopists' visual analogue scale showed similar results (median Picolax 80%, enema 90%).

Discussion

These results show that although there is no difference between the efficacy of the two preparations, Picolax is clearly preferred by patients. At

National Health Service prices current during the study, 2 Klyx enemas cost a little more than 1½ sachets of Picolax (£0.72 vs £0.45).

Bowel evacuation with Picolax is not as rapid as the enemas. In a well organized endoscopy unit this is not a disadvantage, but for those providing the service in an outpatient clinic setting, the delay may be counterproductive.

Faecal peritonitis caused by Picolax⁴ appears to be an exceptionally rare event⁵ and is no reason to avoid Picolax when the study is clinically appropriate.

Klyx enemas have now been withdrawn from the market, because of low demand and lack of profitability. However, there is no real difference between the composition of Klyx and other

available enemas – micolette, relaxit, micralax, Fletcher's enemette and Fletcher's phosphate – most of which contain a surfactant wetting agent and an osmotic laxative. It is therefore very likely that the results of this study should also apply to the other standard enemas.

In view of patients' preference for Picolax and its equal efficacy to Klyx enemas, we recommend the use of Picolax for flexible sigmoidoscopy in the outpatient-theatre setting.

Acknowledgements

We would like to thank Sister Sharon Munro and the nursing staff of the Gastrointestinal Unit, Hull Royal Infirmary, Hull for their help with this project.

References

1. Leicester, R.J., Pollett, W.G., Hawley, P.R. & Nicholls, R.J. Flexible sigmoidoscopy as an outpatient procedure. *Lancet* 1982, **i**: 34.
2. Ott, D.J., Wu, W.C. & Gelfand, D.W. Extent of colonic visualization with the fiberoptic sigmoidoscope. *J Clin Gastroenterol* 1982, **4**: 337.
3. Hughes, K., Mann, S., Cooke, M.B.D. & James, W.B. A new oral bowel evacuant (Picolax) for colon cleansing. *Clin Radiol* 1983, **34**: 75–77.
4. Phipps, R.F. & Fraser, S. Faecal peritonitis induced by Picolax. *Br Med J* 1987, **295**: 1027.
5. Grace, R. & Hale, M. Faecal peritonitis induced by Picolax. *Br Med J* 1987, **295**: 1413.