

Lubiprostone: Clinical applications beyond constipation

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Abstract

In comparison to polyethylene glycol, lubiprostone offers other advantages and is increasingly being used as an adjunctive agent in diagnostic as well as management strategies not only in gastroenterology, but in other fields. For instance, lubiprostone exerts beneficial effects in cystic fibrosis tissues. It augments the chloride secretion in these cells by activating non-cystic fibrosis transmembrane regulator (CFTR) secretion of chloride by afflicted respiratory epithelia. Lubiprostone also seems to improve visualization of the gastrointestinal tract during procedures such as colonoscopy. This is especially true if the lubiprostone is administered prior to bowel cleansing with agents such as polyethylene glycol electrolyte (PEG-E). Lubiprostone also enhances and stimulates contraction in colonic as well as gastric muscles and may thus further contribute as a prokinetic agent. Besides these effects, lubiprostone also causes hyperpolarization in other tissues such as uterine muscle cells. This may prove to be of significant clinical benefit in the management of uterine pathologies in the near future.

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Key words: Lubiprostone; Cystic fibrosis; Colonoscopy; Uterine muscle; Prokinetic agent

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TO THE EDITOR

I read with great interest the recent article by Moeser *et al*^[1]. The authors have provided an interesting

comparison of lubiprostone and polyethylene glycol. In comparison with polyethylene glycol, lubiprostone offers other advantages and is increasingly being used as an adjunctive agent in diagnostic as well as management strategies not only in gastroenterology, but in other fields.

For instance, lubiprostone exerts beneficial effects in cystic fibrosis tissues. It augments the chloride secretion in these cells by activating non-cystic fibrosis transmembrane regulator (CFTR) secretion of chloride by afflicted respiratory epithelia^[2]. Lubiprostone also seems to improve visualization of the gastrointestinal tract during procedures such as colonoscopy. This is especially true if the lubiprostone is administered prior to bowel cleansing with the agents such as polyethylene glycol electrolyte (PEG-E)^[3]. Lubiprostone also enhances and stimulates contraction in colonic as well as gastric muscles and may, thus, further contribute as a prokinetic agent^[4]. Besides these effects, lubiprostone also causes hyperpolarization in other tissues such as uterine muscle cells^[5]. This may prove to be of significant clinical benefit in the management of uterine pathologies in the near future.

It is clear from the above examples that lubiprostone has an array of clinical features that may enhance its clinical application in gastroenterology. Further studies are needed to evaluate lubiprostone as an effective agent for the management of other diseases besides constipation.

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