

Lavage Bowel Preparation Method for Colonoscopy

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The practice of colonic irrigation (colonic hydrotherapy) to promote general health and well-being under the premise of “auto-intoxication” has been ostracized by the medical community since the early twentieth century.(1,2) The available published literature for colonic irrigation is compiled from review articles, case series, and case reports without methodologically sound controlled trials supporting this approach for general health promotion.(3,12,13) However, as the number of digestive diseases and bowel dysfunctions in the US continues to rise (4,5,6) and with it a concurrent need for direct gastrointestinal imaging, a lavage method of bowel preparation has emerged as a superior means of bowel cleansing when indicated.(7)

“Colonic irrigation system” is the instrumentation used for lavage bowel preparation and is a Class II medical device cleared by the FDA.(8) Use of a Class II medical device requires operating standards following federal and state regulations, physician prescription, appropriate licensure and with policy and education approved by an Internal Review Board (IRB) insuring safety and quality control. Conversely, the unlicensed or unregulated use of colonic irrigation systems for *general health and well-being* falls into Class III, a high risk category,(8) with literature characterizing dangers for this approach.(9,10) The majority of medical literature for bowel cleansing is directly related to colonic irrigation for *general well-being* under the category of Class III, high risk use.(1,2,3,9-13)

Less represented in the literature is the Class II regulated use of colonic instrumentation for direct visualization of the colon as medically indicated. This method has been used successfully as a solution for patients preparing for colonoscopy that suffer from oral bowel preparation intolerance.(14,17) Lavage(15) bowel preparation (LBP) method has potential as an effective and low risk tool in this clinical setting when following standardized operating and governing regulations.(11,12)

In 2006, Danbury Hospital in Danbury, CT, conducted a controlled, randomized trial with 150 patients in a comparative study utilizing (regulated) colon(ic) hydrotherapy (LBP) as a bowel preparation for colonoscopy.(14) The Danbury study concluded that this method was equal in safety to traditional preparations, visualization of the colon as good or better, and with an increase in patient satisfaction and a stated preference over the traditional preparation methods.(7)

In 2011, a second Danbury study analyzed serum electrolyte levels on a 34 patients using LBP as a bowel preparation for colonoscopy. Results substantiated that LBP does not change electrolytes to any statistically significant degree.(16)

In 2011, a patient satisfaction survey result of 64 patients receiving LBP at Barton Hospital in South Lake Tahoe, CA, concurred with the Danbury studies regarding the efficacy, safety and tolerability of LBP for colonoscopy.(17) Ninety-six percent of

survey responders would choose LBP for their next colonoscopy, and 66% were first time colonoscopy patients choosing LBP because they were given the option. Patients were willing to pre-pay the fee to cover the cost of services and supplies.

Both facilities use closed-system colonic instrumentation. A closed-system has capability for manual operative control and is connected to the patient from anus to waste management with single-use disposables. This allows for cleansing and evacuation through controlled fecal elimination (all maintained) in a closed system. LBP provides a procedure to lavage material from the walls of the bowel, from rectum to cecum, with controlled bowel evacuation. A nurse monitors the patient for tolerance and lavage indicators, and performs the procedure controlling temperature, water pressure and flow rate into the bowel, evacuation of waste contents, and length of procedure. LBP method is repeatable and measurable.

Colonoscopies are generally reported to have a bowel preparation inadequacy rate of 20-25% with reasons for this failure ranging from medical conditions that make it more difficult to clean out the colon and patient compliance with prep instructions, to unit-specific factors that include extended wait times for scheduled colonoscopy exam.⁽¹⁸⁾ LBP aims to improve preparation inadequacy rate for reasons pertaining to conditions that make it more difficult to clean out the colon and patient compliance with prep instructions⁽¹⁹⁾ when compared to traditional methods. Patients avoiding colonoscopy screening because of the preparation experience now have an option which may improve willingness to undergo the exam.⁽²⁰⁾ Offering an affordable and tolerable alternative to bowel cleansing can help improve outcomes as a successful precolonoscopy bowel cleansing method contributes directly to the successful detection and removal of precancerous lesions.

Constipation may be another emerging indication for LBP. Emergency departments between the years 2006-2011 revealed a 42% increase in ED admissions due to constipation, with a 56% increase in cost per patient.⁽²¹⁾ Three primary causes of constipation are pelvic floor dysfunction, slow transit constipation, and functional constipation⁽²²⁾ (chronic idiopathic constipation [CC] and irritable bowel syndrome with predominant constipation [IBS-C]). Secondary reasons for constipation can be iatrogenic as seen with pain management, in chemotherapy, and post-operative orthopedic patients. CC and IBS-C, however, are the two most common conditions among functional bowel disorders⁽²³⁾ with functional bowel disorders affecting an estimated 25% of our population.^(22,23) Despite current multiple therapeutic options, treatment remains challenging and dissatisfactory to many patients suffering from constipation,⁽²⁴⁾ and also to the medical personnel taking care of the patient.

LBP has been used successfully for colonoscopy in two American medical facilities for five (2011) and ten years (2006)^(25,26) with patients scheduling 4-8 weeks in advance for the service.^(17,26) Patient satisfaction is highly commendable for the procedure and patients are self-navigating to undergo screening colonoscopy because they have another bowel preparation option.^(7,27)

The successful and affordable method of LBP for precolonoscopy cleansing warrants further investigation to assess the effectiveness of this new intervention, and, thereby, its value in clinical practice.

DISCLOSURE

Susan Frailey BSN RN is founder of HydroPrep® Lavage Bowel Preparation Method, and Colon HydroPrep Solutions, an approved provider of continuing education for registered nurses.

Susan Frailey BSN RN, and Colon HydroPrep Solutions, LLC, has disclosed no relevant financial relationship with any product manufacturer or equipment provider mentioned, and has received no outside financial support for these works.

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lavage: the act or action of washing; *especially* : the therapeutic washing out of an organ or part <gastric lavage> www.merriam-webster.com/medical/lavage (retrieved October 16, 2015)

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