

Colonic Detoxification among Patients Attending General Surgical Clinics: An Epidemiological Study

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Background: Colonic detoxification is a popular form of “alternative medicine”.

Objective: To study the epidemiology of colonic detoxification in general surgical outpatients.

Material and Method: Questionnaires consisting of items measuring demographic variables, methods and resources of colonic detoxification, factors associated with the preference to undergo colonic detoxification, and results of colonic detoxification were administered to general surgical outpatients. Patients were classified as having colorectal and non-colorectal conditions.

Results: One thousand nine hundred and thirty nine questionnaires were distributed and returned. Ninety-one patients (4.7%) had colonic detoxification. More female patients performed colonic detoxification than male patients (83.5% vs. 16.5%). The mean age of patients who performed colonic detoxification was 50.0 ± 11.3 years (range 22-71 years). Coffee was the most commonly used substance for colonic detoxification (90.1%). The majority of patients performed the procedures by themselves (73.6%). The frequency of procedures was 1-5 times per month in 26.4% of patients. Seventy eight percent of patients felt better, while 17.6% felt the same and 4.4% felt worse after the procedure. The patients who performed colonic detoxification had more colorectal problems than those who did not; the risk ratio was 1.35 (95% CI, 0.82 to 2.22), but this was not statistically significant ($p = 0.241$). In subgroup analysis, cancer was the significant preferential factor in patients who performed colonic detoxification (risk ratio = 1.55 (95% CI, 1.13-2.14), and p -value = 0.011). The complication rate of colonic detoxification was 2.19% (rectal bleeding).

Conclusion: The presented article was the first study of colonic detoxification in a Thai population. The result of the present study suggests that colorectal conditions are not related to the performance of colonic detoxification.

Keywords: Colonic hydrotherapy, Coffee enema, Colorectal diseases, Complication

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Colonic detoxification has been used since 1,500 BC⁽¹⁾. The theory of “auto-intoxication” has been proposed to suggest that by-products of incomplete digestion may poison the body and cause diseases. The colon was viewed as “Toxic Sewer” and responsible for diseases in this theory^(2,3). To minimize the threat of auto-intoxication, the contact time of the toxic material in the intestines must be shortened. Enemas of various types and colonic hydrotherapy, therefore,

have formed an important part of traditional medicine to prevent or treat various benign and malignant conditions.

The modern medical attitude toward colonic detoxification suffers from lack of information and over claim of its effectiveness. Relevant data on its adverse effects are reported such as perforation^(4,5), amebiasis from improperly sterile equipment⁽⁶⁾, extensive abscess in retroperitoneum and pelvis⁽⁷⁾, and life-threatening perineal gangrene⁽⁸⁾. Texas Attorney General’s website claimed that one death and four serious injuries involving patients with perforated colons occurred in 2003⁽⁹⁾.

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Colonic detoxification became popular in the late 1800s and early 1900s as a treatment of auto-intoxication and was used commonly for a variety of system diseases. The benefit of this method had no proven scientific research and exaggerated claims of health benefits. The American Medical Association formed the Bureau of Invention. It initiated rigorous scientific investigation into the theory of auto-intoxication^(10,11).

The benefit of colonic detoxification has been reported in some colorectal disorders such as constipation⁽¹²⁾ and colitis⁽¹³⁾. The US National Cancer Institute is funding phase III clinical trials of a controversial treatment for advanced pancreatic cancer. Detoxification through coffee enema is one of the therapies in the Gonzalez regimen that is investigated by this fund. The preliminary data of 45 patients who received up to 150 dietary supplements daily and took coffee enema with chemotherapy showed the survival of 17.5 months longer than those 45 patients who received intravenous chemotherapy with Gemcitabine⁽¹⁴⁾.

Colonic hydrotherapy and the concept of detoxification are increasingly popular in Thailand. In the present study, the authors sought to determine the epidemiological data of colonic detoxification in general surgical outpatients. Factors associated with preferences to undergo colonic detoxification were analyzed.

Material and Method

Questionnaires consisting of items measuring demographic variables, method and resource of colonic hydrotherapy, factors associated with the preference to undergo colonic detoxification, and results of colonic detoxification were administered to the patients of the general surgical outpatient clinic at Ramathibodi Hospital between July 2005 and March 2006. To understand the ritual of colonic hydrotherapy, the interview was set up in patients who had performed colonic hydrotherapy. Patients were classified into colorectal and non-colorectal group. The statistical difference of colonic detoxification between both groups was calculated using the Chi-square test. Factors associated with performing detoxification were used to calculate the risk ratio with 95% confidence interval (95% CI). A p-value of 0.05 or less was considered significant. STATA version 7 (Stata Corp, College Station, TX, USA) was used for statistical analysis.

Results

One thousand nine hundred and thirty nine questionnaires were distributed and returned. The

incidence of colonic detoxification in the general surgical outpatient clinic was 91 per 1,939 (4.69%) (Table 1). Female patients performed colonic detoxification much more often than male patients (83.52 vs. 16.48%). The mean age of patients who performed colonic detoxification was 50.04 ± 11.25 years (22-71 years). Coffee was the most commonly used substance for colonic detoxification (90.11%). Lemon juice, pure water, electrolyte fluid, and normal saline solution were used in 4.40%, 3.30%, 4.40%, and 1.10%, respectively (Table 2). The majority of patients performed the procedures by themselves (73.63%). The frequency of procedures was 1-5 times per month in 26.37% of patients. Seventy percent of patients felt better, while 17.58% felt the same and 4.4% felt worse after the procedure. The patients who performed colonic detoxification did not have more significant colorectal problems than the patients who did not, risk ratio was 1.35 (95% CI, 0.82 to 2.22) and $p = 0.241$. The complication rate of colonic detoxification was 2.19% (rectal bleeding).

Epidemiologic data of colonic detoxification

The majority of patients (26.37%) performed colonic detoxification one to five times per month (Table 3). The leading causes that initiated patients to perform colonic detoxification were advice from friends

Table 1. Demographic data of patients

Patients	Number (n = 1,939)	Age (mean \pm SD)
Colonic detoxification	91	50 \pm 11.25
Male	15 (16.48%)	54 \pm 10.98
Female	76 (83.52%)	49 \pm 11.21
No colonic detoxification	1,848	49 \pm 14.75
Male	367 (19.86%)	54 \pm 15.54
Female	1,481 (80.14%)	49 \pm 14.61

Table 2. The substances used for colonic detoxification

Substances	Number (percent) (n = 91)*
Coffee	82 (90.1%)
Lemon juice	4 (4.4%)
Pure water	3 (3.3%)
Electrolyte fluid	4 (4.4%)
Normal saline solution	1 (1.1%)

* More than one solution

Table 3. Frequency of performing detoxification

Frequency	Number (percent)
More than 10 times per month	7 (9.69%)
6-10 times per month	6 (6.59%)
1-5 times per month	24 (26.37%)
1-4 times per year	9 (9.89%)
Not specify	45

and relatives 40.66%, illness 25.27%, and information from books 18.68%. Sixty percent of patients continued the procedures regularly.

Seventy-eight percent of patients felt better after colonic detoxification. The better feelings were described as easy defecation, improvement of dyspeptic symptom, increased appetite, and improved skin texture. Seventeen percent of patients felt the same and 4.40% of patients felt worse after the procedure. The worse feelings were described as dizziness, abdominal pain, urinary frequency, and increased bowel movement. The complication of rectal bleeding was found in two patients (2.19%).

Resources of colonic detoxification

Seventy-three percent of the patients performed colonic detoxification by themselves. Thirteen

percent of patients used the service from private hospitals and 5.5% of patients used non-license medical facilities.

Factors associated with preferences to perform colonic detoxification

In the present study, the authors divided the patients into colorectal and non-colorectal groups. The patients who performed colonic detoxification did not have more significant colorectal problems than the patients who did not perform it. Risk ratio was 1.35 (95% CI, 0.82 to 2.22) and $p = 0.241$ (Table 4). In subgroup analysis, cancer was the significant preferential factor in patients who performed colonic detoxification. Risk ratio was 1.55 (95% CI, 1.13-2.14) and p -value = 0.011 (Table 5). It was found that colorectal cancer was not associated with the preference to perform colonic detoxification. Risk ratio was 2.00 (95% CI, 0.95-4.23) and p -value = 0.068 (Table 6).

Discussion

The recent medical attitude toward colonic detoxification stems from a lack of information about the historical debate on their safety and efficacy⁽¹⁵⁾. The US Food and Drug Administration (FDA) position the colonic hydrotherapy devices and procedure as “significant risk devices” (Class III) when colonic cleansing is used for general well being^(16,17). The

Table 4. Factor associated with performing detoxification (Colorectal diseases and non-colorectal diseases)

	Colonic detoxification n (%)	Non-colonic detoxification n (%)	Total
Colorectal diseases	14 (15.38)	210 (11.36)	224
Non-colorectal diseases	77 (84.62)	1,638 (88.36)	1,715
Total	91	1,848	1,939

Risk ratio = 1.35 (95% CI, 0.82 - 2.22), and p -value = 0.241

Table 5. Factor associated with performing detoxification (Cancer and non-cancer)

	Colonic detoxification	Non-colonic detoxification	Total
Cancer	28	366	394
Non-cancer	63	1,482	1,545
Total	91	1,848	1,939

Risk ratio = 1.55 (95% CI, 1.13-2.14), and p -value = 0.011

Table 6. Factor associated with performing detoxification (Colorectal cancer and non-colorectal cancer)

	Colonic detoxification	Non-colonic detoxification	Total
Colorectal cancer	7	71	78
Non-colorectal cancer	84	1,777	1,861
Total	91	1,848	1,939

Risk ratio = 2.00 (95% CI, 0.95-4.23), and p-value = 0.068

benefit of colonic detoxification has been reported in colorectal disorders such as constipation and colitis. In the present study, the authors found that the group of patients who had colorectal disease did not perform colonic detoxification more often than other surgical outpatients. Cancer was the significant preferential factor in patients who performed colonic detoxification. Female was found to predominate in patients who performed colonic detoxification. The prevalence of colonic detoxification in the present study was 4.69%. No other report was found to compare the incidence. Coffee was the most commonly used substance for colonic detoxification. The majority of patients performed the procedure by themselves. All patients who performed colonic detoxification used the hydrotherapy procedure (no enema). The frequency of procedure was 1-5 times per month in 26.37% of patients. Seventy percent of patients felt better after the procedure.

Coffee was the most commonly used substance for colonic detoxification in the present study. The proponents of this therapy claim that caffeine is absorbed in the colon and leads to vasodilatation and dilation of bile ducts in the liver, which in turn enhances excretion of toxins and toxic cancer breakdown products by the liver and dialysis of toxic products from blood across the colonic wall⁽¹⁸⁻²²⁾. None of this is proved, nor is there any evidence of its clinical efficacy. Moreover, coffee enema is associated with severe adverse reactions⁽²³⁾.

The adverse effects of colonic hydrotherapy can be classified into four types⁽²⁴⁾. The first type is perforation of the wall of the colon or rectum. The second type is a reaction to substances. The third type is electrolyte imbalance, which is found primarily in pediatric and geriatric patients. The fourth type is infection from contaminated equipment. The complication of rectal bleeding was found in two patients (2.19%). No serious complication was found in the present study.

In conclusion, this was the first report of epidemiological study of colonic detoxification in Thai population. The result of the present study suggested that colorectal diseases and colorectal cancer were not preferential factors for patients to perform colonic detoxification.

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การศึกษาวิทยาการระบาดของการสวนล้างพิษทางลำไส้ใหญ่ในผู้ป่วยทางศัลยกรรม

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ภูมิหลัง: การสวนล้างพิษทางลำไส้ใหญ่เป็นการแพทย์ทางเลือกที่ได้รับความนิยมในปัจจุบัน

วัตถุประสงค์: เพื่อหาข้อมูลทางระบาดวิทยาของพฤติกรรมนี้ในผู้ป่วยนอก แผนกศัลยกรรม

วัสดุและวิธีการ: ผู้ศึกษาได้ใช้แบบสอบถามเพื่อหาข้อมูลต่าง ๆ เกี่ยวกับการสวนล้างพิษทางลำไส้ใหญ่ เช่น วิธีการสารที่ใช้ แหล่งข้อมูลที่ผู้ป่วยได้รับ ปัจจัยที่มีผลต่อการตัดสินใจในการปฏิบัติ ผลของการปฏิบัติ

ผลการศึกษา: ข้อมูลผู้ป่วยได้ถูกแบ่งออกเป็นกลุ่มที่มีโรคทางลำไส้ใหญ่และทวารหนัก และผู้ป่วยอื่น ๆ ผู้ป่วยที่ตอบแบบสอบถามมีทั้งหมด 1,939 คน อุบัติการณ์ของการสวนล้างพิษทางลำไส้ใหญ่เท่ากับร้อยละ 4.7 ผู้หญิงทำการสวนล้างพิษทางลำไส้ใหญ่มากกว่าผู้ชาย (ร้อยละ 83 ในผู้หญิงและร้อยละ 16.5 ในผู้ชาย) อายุเฉลี่ยของผู้ที่ทำการสวนล้างพิษทางลำไส้ใหญ่เท่ากับ 50.0 ± 11.3 ปี (อยู่ระหว่าง 22 ถึง 71 ปี) กาแฟเป็นสารที่ใช้มากที่สุดในการสวนล้างพิษทางลำไส้ใหญ่ ผู้ป่วยส่วนใหญ่ทำการสวนล้างพิษด้วยตนเอง (ร้อยละ 73.6) ความถี่ของการทำสวนใหญ่อยู่ระหว่าง 1 ถึง 5 ครั้งต่อเดือน ในร้อยละ 26.4 ของผู้ที่ปฏิบัติ พบว่าร้อยละ 78 ของผู้ป่วยรู้สึกดีขึ้นหลังทำการสวนล้างพิษทางลำไส้ใหญ่ ในขณะที่ร้อยละ 17.6 ไม่รู้สึกว่ามีการเปลี่ยนแปลง และร้อยละ 4.4 รู้สึกว่าแย่ลง จากการวิเคราะห์ทางสถิติพบว่า ผู้ป่วยกลุ่มที่ทำการสวนล้างพิษทางลำไส้ใหญ่มีโรคทางลำไส้ใหญ่และทวารหนักมากกว่ากลุ่มที่ไม่ได้ทำ แต่ไม่พบว่ามี ความแตกต่างทางสถิติ เมื่อวิเคราะห์ในกลุ่มย่อยพบว่า โรคมะเร็งเป็นปัจจัยสำคัญที่ทำให้ผู้ป่วยมีพฤติกรรมนี้ ภาวะแทรกซ้อนที่เกิดจากการสวนล้างพิษทางลำไส้ใหญ่ในการศึกษานี้เท่ากับร้อยละ 2.19 (เลือดออกทางทวารหนัก)

สรุป: การศึกษานี้เป็นรายงานแรกถึงการสวนล้างพิษทางลำไส้ใหญ่ในประเทศไทย จากการวิเคราะห์ทางสถิติพบว่าผู้ป่วยที่มีโรคทางลำไส้ใหญ่และทวารหนักไม่ได้ทำการสวนล้างพิษทางลำไส้ใหญ่มากกว่าผู้ป่วยที่ไม่มีโรคทางลำไส้ใหญ่และทวารหนัก
