

Colon Hydrotherapy for defecation disorders

Systematic Review



Ludwig Boltzmann Institut
Health Technology Assessment

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Project leader: Dr. Claudia Wild
Author: Katharina Hintringer

CONTACT INFORMATION

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Responsible for Contents:



Ludwig Boltzmann Institute of Health Technology Assessment (LBI-HTA)
Garnisongasse 7/20, A-1090 Vienna
<http://hta.lbg.ac.at/>

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1 Colon Hydrotherapy for obstructed defecation

1.1 Background

Colon hydrotherapy (CHT) is a form of complementary medicine with its first implementation dating back to the 15th century B.C. [1]. Until the beginning of the 19th century it was believed that illnesses like fever, quinsy, pleurisy, intestinal and other disorders originate from toxic waste which cannot be aborted naturally in the colon. In the 20ies and 30ies of the 19th century colonic hydrotherapy was widely used. Nowadays, only a limited number of physicians offer CHT. The decrease in the usage of CHT is explained by lack of empirical data concerning clinical effectiveness and the significant upturn of conventional medicine as well as the development of chemical drugs [2].

Although, colon-hydro therapy or colonic irrigation still is used with regard on detoxification and improvement of defecation disorders [1].

This systematic review summarizes studies which are concerned with the use of Colon Hydrotherapies by therapists in patients with obstructed defecation. Unfortunately the number of studies available in published literature is very limited [2].

CHT is a very old form of complementary medicine

used for detoxification and improvement of defecation disorders

this review evaluates the evidence of CHT for obstructed defecation

1.2 Description of treatment

During treatment the patient is laying on a patient bed either in dorsal position or on his/ her left side. Through a plastic tube tempered and filtered water is administered into the colon. Additionally to the circulating water the therapist can encourage the cleansing with a precise massage on the abdominal wall. Thereby, the therapist finds problem areas in the colon and leads the inflowing water to the affected area. A second separate tube is used to flush out the administered water and the soluble residues of the colon. Both, inflow and outflow tubes, are connected to a disposable adapter which is inserted into the anus. The eliminated liquid has to be disposed under consideration of strict hygienic regulations [3].

The intention of CHT is the cleansing of the colon, the stimulation of the action of the bowels and the support of the immune system and metabolism. The results of the alternation of warm and cold water in the colon is the washout of the intestinal content [3].

On average 56 l (range 9-132 l) of tempered water are administered during one session. One session usually last between 30-60min [1].

administration of tempered water into the colon

inflow/ outflow system

aim of CHT: cleansing of the colon, stimulation of the bowels

1.3 Indication and therapeutic aim

The indications covered in this review are obstructed defecation disorders like constipation. The therapeutic aim is the alleviation or cure of these conditions. Nevertheless CHT is always applied for irritable bowel

indication and therapeutic aim

syndrome, psychiatric problems and defecation disorders (constipation, fecal incontinence), but no controlled, only case studies for these other conditions were found.

1.4 Treatment costs

costs per CHT session

Taffinder et al. collected the costs per session within their survey “Retrograde commercial colonic hydrotherapy” conducted 2004 in Great Britain. The costs for the client varied from £ 50 to £ 80 per session [1].

2 Literature search and selection

2.1 PICO question

Is Colon Hydrotherapy effective in reducing obstructed defecation compared to standard therapy? Is Colon Hydrotherapy safe?

PICO question

2.2 Inclusion criteria

Table 2.2-1: Inclusion criteria

Population	Patients with obstructed defecation
Intervention	Colon Hydrotherapy received from medical professionals (physicians, physiotherapists, nurses, ...)
Control	Placebo, Standard of Care
Outcome	Reduction of obstructed defecation
Study design	All prospective studies with a control group

inclusion criteria

2.3 Literature search

The systematic literature search was carried out on 08.01.2009 in the following databases.

literature search

- ✿ Medline via Ovid
- ✿ Embase
- ✿ PubMed
- ✿ Cochrane library
- ✿ CRD

The search was limited to English and German language literature and covered the entire time span of the databases.

After removal of duplicates, 15 bibliographical references were available. The exact search strategy can be requested at the LBI for HTA.

By means of hand search, 3 additional references were identified.

2.4 Literature selection

literature selection Overall, 18 articles were available for the literature selection. The selection process is depicted in Figure 2.4-1.

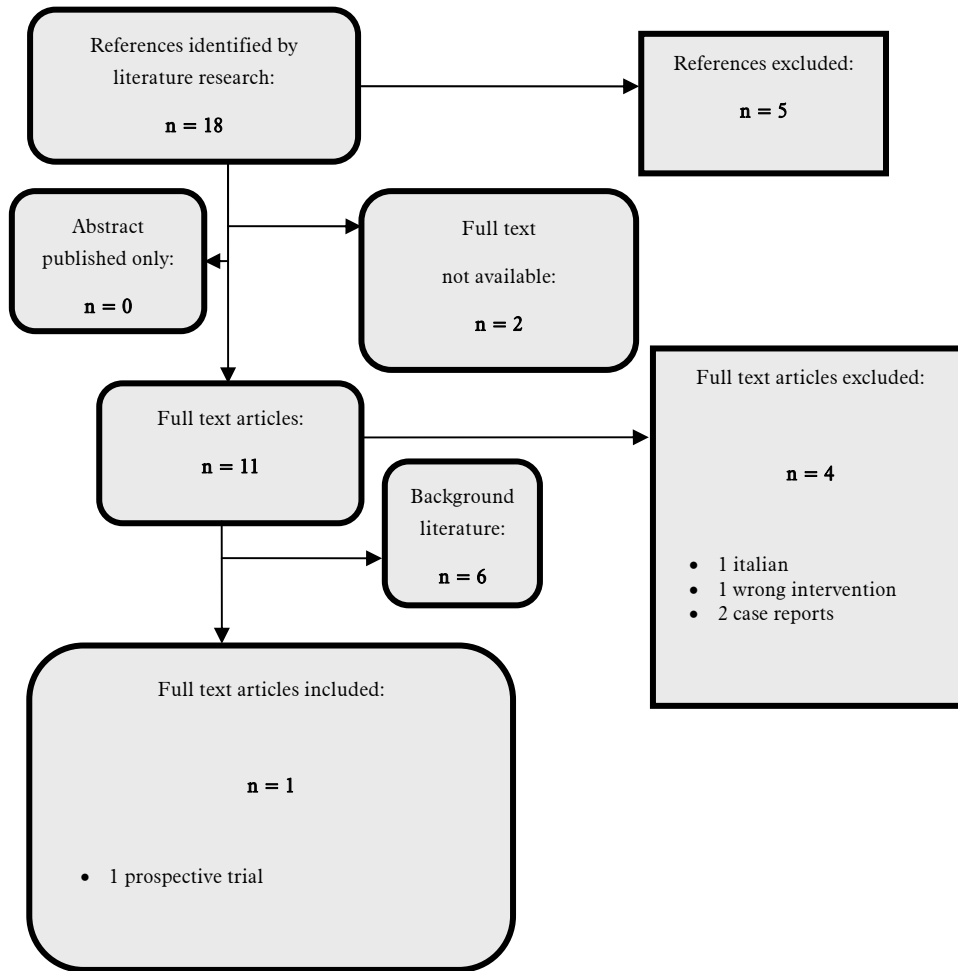


Figure 2.4-1: Depiction of the selection process (QUORUM tree)

3 Assessment of the quality of the studies

The evaluation of the quality of the studies was carried out by two reviewers, independently of each other. Conflicting views were settled by means of discussion and consensus, or through the involvement of a third person. An exact list of the criteria that were used for the evaluation of the internal validity of the studies can be found in the internal manual of the LBI-HTA [4].

assessment of quality of studies carried out by two reviewers

4 Data extraction

The extraction of the data was carried out by one person. A second person checked the completeness and accuracy of the data.

extraction of data by one person

4.1 Presentation of the study results

One prospective study (Pizzetti 2005) was included to answer the question as to whether CHT is effective in reducing obstructed defecation and whether CHT is safe.

1 prospective study included

Table 4.1-1: Study results

Author, Year, Reference number	Pizzetti et al. 2005 [5]
Country	Italy
Sponsor	Italian Society of Colo-Rectal Surgery – Unit of Rome and Milan
Study design	RCT
Study quality	Poor
Number of patients	20
Lost to follow up	None
Study population	Patients with obstructed defecation
Ø Patient age (years)	Not reported
Indication for CHT	Obstructed defecation
Intervention	CHT using the Hydromat irrigation device
Control	Standard therapy (ST), i.e. fibres, bluk laxatives, rehabilitation or prolapse excision

Duration of treatment	1-4 months (mean 2 months)
Main outcome measures	Modified Wexner score and Iceberg score
Results	<p>10 patients in the CHT group – 6 treatments each, two per week; ST group, both medical therapy (n=10) and rehabilitation (n=3) lasted one month.</p> <p>No statistical comparison between the two groups; Mean Iceberg score was 4 (range 3-5) in the CHT group and 5.2 (range 3-7) in the ST group. Mean modified Wexner score decreased from 8 (range 2-14) to 4.5 (range 1-8) after CHT and decreased from 11.6 (range 6-18) to 9.2 (range 1-16) after ST.</p>
Adverse events	No CHT related adverse events occurred

4.2 Efficacy

1 prospective study of CHT compared to standard therapy

One prospective study of poor quality reported on the efficacy of CHT in reducing obstructed defecation compared with standard therapy. Pizzetti et al. found CHT to be more effective than standard therapy in reducing or alleviation obstructed defecation. Patients were evaluated by modified Wexner Score (before and after treatment) and Iceberg Score (prior treatment). The modified Wexner score (range 1-20) is taking into account the amount of straining, time spent on toilet, sense of incomplete evacuation, number of weekly bowel motions and abdominal pain whereas, the 1-12 Iceberg Score measured the number of both functional and organic underlying lesions.

After the treatment period the patients were evaluated by an independent observer. No patient was lost to follow up.

CHT superior to standard therapy

Mean modified Wexner score decreased from 8 (range 2-14) to 4.5 (range 1-8) in the CHT group and from 11.6 (range 6-18) to 9.2 (range 1-16) in the ST-group. Although, CHT nearly halved the symptom's score, 40% still suffered from constipation after irrigation and the recurrence rate of obstructed defecation in the ST group was 60%.

4.3 Safety

no CHT related events occurred

Pizzetti et al. (2004) reported that no CHT-related adverse events occurred, whereas, in the control group (ST) 2 cases – after double stapling rectomy (n=1) and manual prolapsectomy (n=1) – needed re-interventions for rectal bleeding, pelvic sepsis and recurrent constipation due to a non relaxing puborectalis muscle on straining. One of the two patients ended with a stoma and both had psychological problems.

5 Strength of the Evidence

The GRADE system is used [6] to evaluate the strength of the evidence. GRADE uses the following classifications and definitions to evaluate the strength of the evidence.

GRADE system

- ⊗ High: further research is very unlikely to change our confidence in the estimate of effect
- ⊗ Moderate: Further research is likely to have an important impact on our confidence in the estimate of effect and may change the estimate
- ⊗ Low: Further research is very likely to have an important impact on our confidence in the estimate on effect and is likely to change the estimate
- ⊗ Very low: any estimate of effect is very uncertain

Table 5-1: Colon Hydrotherapies evidence profile

Number of studies/patients	Design	Methodological quality	Consistency of results	Directness	Size of effect	Other modifying factors	Strength of the collective evidence
Outcome: Reduction in examination of obstructed defecation							
1/20	prospective trial	poor	not applicable*	yes	3.5 and 2.4 mean reduction in modified Wexner score in CHT group and ST group, respectively.	none	low

* applicable only if more than one study

6 Conclusion

The evidence about colon hydrotherapy for obstructed defecation is very limited. Only one study that fulfilled the review inclusion criteria of prospectively planned studies with control group and administration by therapist (physician etc.) was available. Results of the study were that CHT is superior to ST and it is recommended as standard therapy used together with biofeedback and psychotherapy as standard therapy for obstructed defecation. However, the study is of poor quality, because of small number of patients, poor randomization and it only covers one indication (obstructed defecation).

Due to the definition of the intervention in the PICO question only one study was included. There are considerably more studies available conducting the effect and safety of enemas and self-administered colon cleansing [7-9].

Overall then, there is little evidence about CHT for obstructed defecation and the evidence that exists, is of poor quality. At least one good quality RCT is required to obtain a clear picture as to whether CHT is effective and safe for defecation disorders.

very limited evidence

CHT recommended as part of standard therapy for obstructed defecation

more evidence for enemas than for CHT available

extensive and good quality RCTs required

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