

CONSERVATIVE NON INVASIVE TREATMENT OF FUNCTIONAL CONSTIPATION: A SYSTEMATIC REVIEW

Hypothesis / aims of study

Functional constipation is a common problem appearing in paediatric outpatient clinics as one of the most common functional gastrointestinal complaints.[1] Worldwide prevalence varies between 0,7% and 29,6%. [1,2] Specific symptoms and severity of constipation have to be clarified by initial evaluation to detect the subtype of functional constipation. Additionally a full medical anamnesis seems mandatory to exclude secondary causes of constipation.[2] The multi-faceted nature of functional constipation should be taken into account when treatment is initiated. Several non-pharmacologic treatments are described that significantly reduce abdominal pain, but have no significant difference in treatment success of functional constipation. Behavioral therapy, dietary fiber intake and increase water intake did also not lead to a significant improvement. Since no consensus is reached on which conservative treatment has the most optimal effect on curing functional constipation, the aim of this systematic review is to summarize the effect of conservative treatments on functional constipation.

Study design, materials and methods

This systematic review was performed in Pubmed and Web Of Science by the preferred reporting items for systematic reviews (PRISMA statement). Only full text articles reporting conservative treatments of functional constipation were eligible. Full text articles were included and assessed for methodological quality by two independent researchers.

Results

Twenty-five studies were included in this systematic review. PEG ($p<0.05$), PEG in combination with electrolytes ($p=0.007$) and transcutaneous electrical stimulation ($p=0.05$) lead to a higher increase of mean stools. Five acupuncture sessions (girls: $p<0.01$; boys: $p<0.05$) and biofeedback ($p<0.001$) lead to an increase in bowel movements. This effect of acupuncture remains after ten sessions ($p<0.01$). After eight weeks of treatment, PEG 3350 ($p<0.01$), lactulose ($p<0.01$), diet therapy or disimpaction ($p=0.0016$) increase the number of defecation frequency per week. After twelve weeks Cisapride increases spontaneous bowel movements per week ($p<0.05$) and decreases fecal soiling episodes per week ($p<0.05$). Conventional treatment consisting of diet, laxatives and behavioural strategies combined with biofeedback therapy also seem to decrease soiling episodes per week ($p<0.01$). Nevertheless it should be reported that 5 placebo acupuncture sessions also lead to an increase in bowel movements in girls ($p<0.05$).

Interpretation of results

A clear benefit of biofeedback, laxatives, PEG and acupuncture in the treatment of functional constipation could be identified. It is apparent that there is not one treatment which can be considered as 'the' treatment. Several conservative treatments or a combination of them can increase the number of bowel movements and diminish the associated consequences. Interestingly, it was observed that placebo acupuncture also generates an improvement in mean stools. This indicates that individual features of the patient should be taken into consideration when treatment is commenced.

Concluding message

A clear benefit of biofeedback, laxatives, PEG and acupuncture in the treatment of functional constipation could be identified. It is apparent that there is not one treatment which can be considered as 'the' treatment. Several conservative treatments or a combination of them can increase the number of bowel movements and diminish the associated consequences. Interestingly, it was observed that placebo acupuncture also generates an improvement in mean stools. This indicates that individual features of the patient should be taken into consideration when treatment is commenced.

References

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2. Alame, A. M., & Bahna, H. (2012). Evaluation of constipation. *Clin Colon Rectal Surg*, 25(1), 5-11.

Disclosures

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