AUTOMATED COLON-SPECIFIC MASSAGE IMPROVES CHRONIC IDIOPATHIC CONSTIPATION IN ELDERLY WOMEN. I. Herrero-Fresneda (1)(2), M. Benet (1), A. Calzada (1), M. Wilhelms (1). (1) USMIMA S.L., c/LLacuna 162, 08018 Barcelona, Spain (2) Corresponding author

The purpose of the study: Colon-specific abdominal massage has been shown to be effective in treating constipation. The aim of the study shown below was to evaluate the effectiveness of a medical device, MOWOOT, which automatically reproduces this manual massage.

Patients: The study was carried out on 10 women between 50 and 90 years of age who had chronic constipation of unknown cause for more than 5 years and who did not use manual abdominal massage as a treatment.

Methodology: The treatment consisted of a 15-minute daily massage with MOWOOT, for 15 consecutive days. Patients should not discontinue any of their usual pharmacological treatments. They were advised to integrate the treatment massage with MOWOOT in their daily routine by administering it always at the same time, if possible, ideally after getting up in the morning or before going to bed.

Parameters and analysis: Before and after treatment, patients answered validated questionnaires to quantify fecal consistency (Bristol Stool Scale, see annex), their constipation index (Cleveland Clinic Constipation Score, see annex) and their quality of life (CVE-20). During treatment, the patients completed an evacuation diary. Patients with anal sphincter dyssynergia and those who did not follow treatment over 50% of the time were excluded from the study.

Each patient served as her own control. Quantitative variables were analyzed using the Student t-test for paired values. Non-parametric variables were analyzed using the Mann-Whitney test. Values of P<0.05 were considered statistically significant.

Results: Only 1 woman (a 50-year working mother) left the study due to a “lack of time”. The remaining 9 patients informed to have completed the entire treatment. Two were excluded from the study, one due to anal dyssynergia and the other for lack of adherence to treatment (MOWOOT use <50% of the time set in the protocol). At the end, the sample consisted of 7 women between 52 and 86 years of age (mean age 71.6 ± 5.2 years).

No adverse effects were reported. All patients described a pleasant sensation and said they felt relaxed during the massage.

The results showed:

- A clear increase in the mean number of stools per week (from 3 per week before treatment to 6 per week after treatment, P = 0.006);
- A significant improvement in fecal consistency (from 3 to 5 on the Bristol scale, $P = 0.056$);
- A marked reduction in defecation time (from 7 to 3.8 minutes per stool, $P = 0.020$);
- A clear reduction in the CCCS index of constipation (from 12 to 8, $P = 0.001$).

Summary table:

**Conclusion**: The colon-specific massage automatically administered with MOWOOT increases evacuation frequency, reduces fecal consistency, and improves chronic constipation in elderly women.
References:


**Bristol Stool Scale**


1. Separated hard lumps, like nuts (hard to pass)
2. Sausage-shaped but lumpy
3. Like a sausage but with cracks on the surface
4. Like a sausage or snake, smooth and soft
5. Soft blobs with clear-cut edges
6. Fluffy pieces with ragged edges, a mushy stool
7. Watery, no solid pieces. Liquid

**Cleveland Clinic Constipation Score (CCCS)**


<table>
<thead>
<tr>
<th>Frequency of bowel movements</th>
<th>Score</th>
<th>Time: minutes in lavatory per attempt</th>
<th>Difficulty: painful evacuation effort</th>
<th>Assistance: type of assistance</th>
<th>Completeness: feeling incomplete evacuation</th>
<th>Failure: unsuccessful attempts for evacuation per 24 h</th>
<th>Pain: abdominal pain</th>
<th>History: duration of constipation (yr)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 times per 1-2 days</td>
<td>0</td>
<td>Less than 5</td>
<td>Never</td>
<td>Without assistance</td>
<td>Never</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2 times per week</td>
<td>1</td>
<td>5-10</td>
<td>Rarely</td>
<td>Stimulative laxatives</td>
<td>1</td>
<td>1-3</td>
<td>Never</td>
<td>0</td>
</tr>
<tr>
<td>Once per week</td>
<td>2</td>
<td>10-20</td>
<td>Sometimes</td>
<td>Digital assistance or enema</td>
<td>2</td>
<td>3-6</td>
<td>Rarely</td>
<td>1</td>
</tr>
<tr>
<td>Less than once per week</td>
<td>3</td>
<td>20-30</td>
<td>Usually</td>
<td>-</td>
<td>3</td>
<td>6-9</td>
<td>Sometimes</td>
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<tr>
<td>Less than once per month</td>
<td>4</td>
<td>&gt;30</td>
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