

Feasibility of abdominal massage for the alleviation of symptoms of constipation in people with Parkinson's

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Background

- 1 in 500 people in the UK have Parkinson's
- 30-80% have constipation
- 5 times more likely than the general population
- Negative effect on quality of life
- Absorption of levodopa is altered

Causes

- Disease related
- Lifestyle factors
- Medication

Treatment

- Diet and fluid management
- Laxatives
- Overall largely pragmatic and without evidence

Aims

- To determine the practicality and appropriateness of abdominal massage for constipation in Parkinson's disease (PD).
- To determine the feasibility of undertaking a randomised controlled clinical trial (RCT)
- To determine sample size for an RCT using power calculations based on the outcome data generated from this study.
- Identify, via qualitative interviews, the effect constipation has on people with PD and any perceived benefits of abdominal massage.

Abdominal Massage

Effect – it is hypothesised that abdominal massage

- Encourages rectal loading
- Encourages peristalsis
- Sensory stimulation effect on the parasympathetic nerves

Technique

The patient lies in a comfortable supine position. The massage is made up of 4 basic techniques:

- **Stroking** – a gentle technique which follows the sensory dermatome of the vagus nerve
- **Effleurage** – slightly firmer, over the ascending and descending colon
- **Kneading** – a firm palmar massage, commencing over the descending colon
- **Vibration** – a gentle technique which helps to relieve flatus

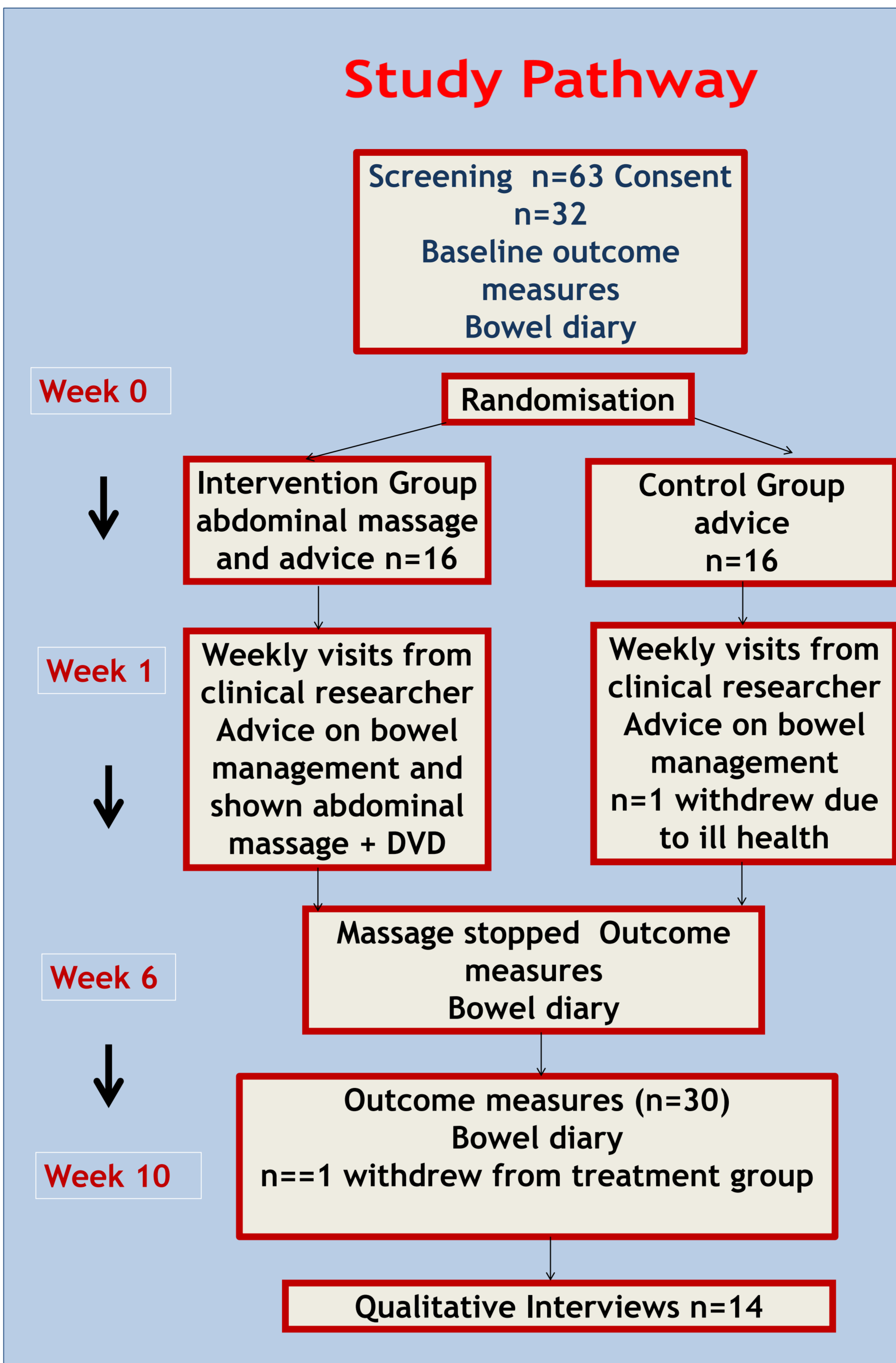
Participants were advised to undertake the massage daily.

Outcome Measures:

- Bowel Diary
- Constipation Scoring System
- Gastrointestinal Rating Scale
- Neurogenic Bowel Dysfunction Score

Further information: NMAPH RU is funded by the Scottish Government's Health Directorates, Chief Scientist Office. It has academic bases within Glasgow Caledonian University and the University of Stirling. The overall aim of the Unit is to improve the care and treatment of patients through scientific study of direct patient care.

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Design

A prospective two-group single blind randomized controlled feasibility trial (N=30).

Inclusion criteria

- Confirmed diagnosis of PD
- Constipation as defined by Rome III criteria
- PD medications stable for one month
- Mini Mental State Examination >24

Exclusion criteria

- History of malignant bowel
- Red flags e.g. passing blood
- Inflammatory disease of the intestine
- Spastic colon with irritable bowel syndrome

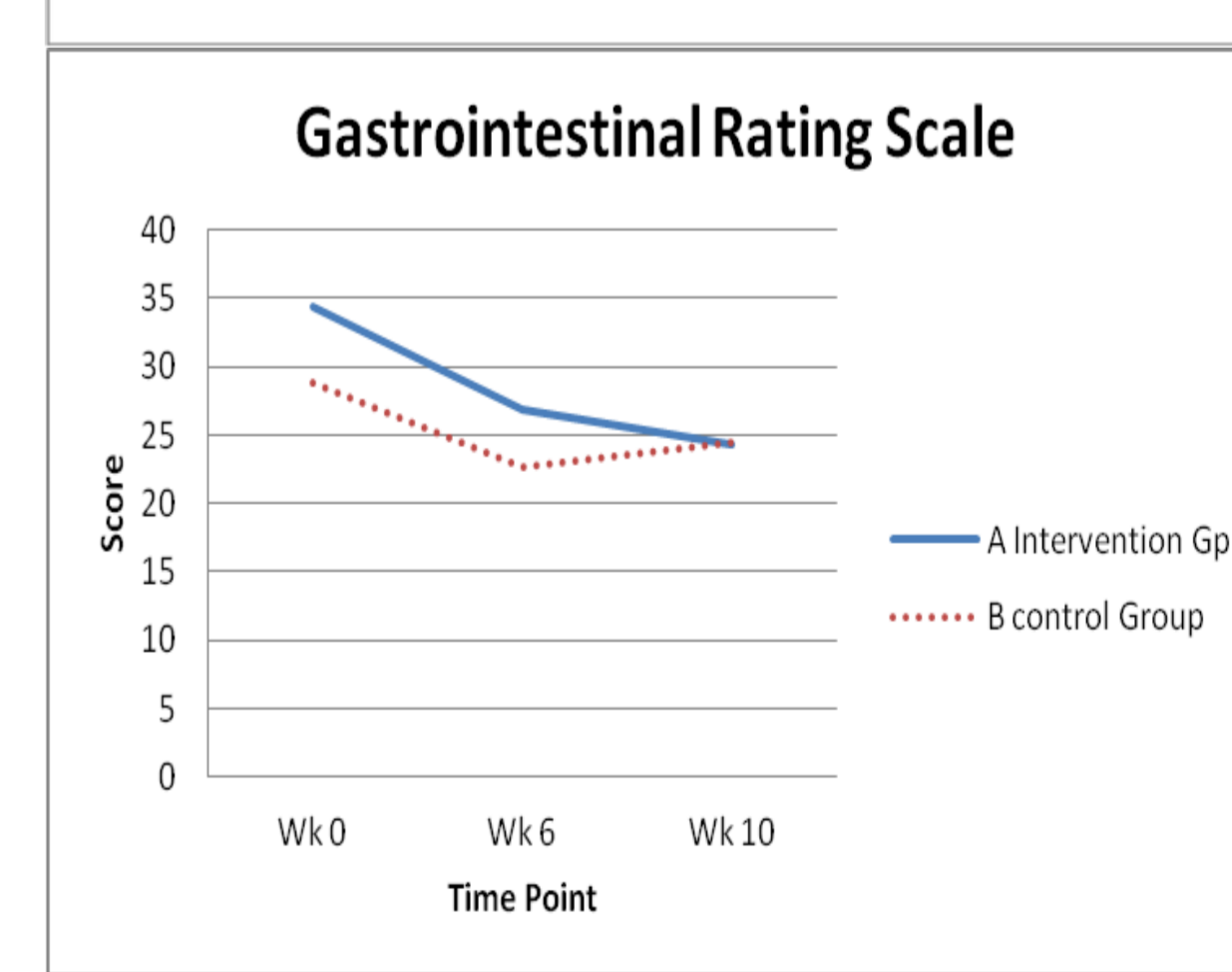
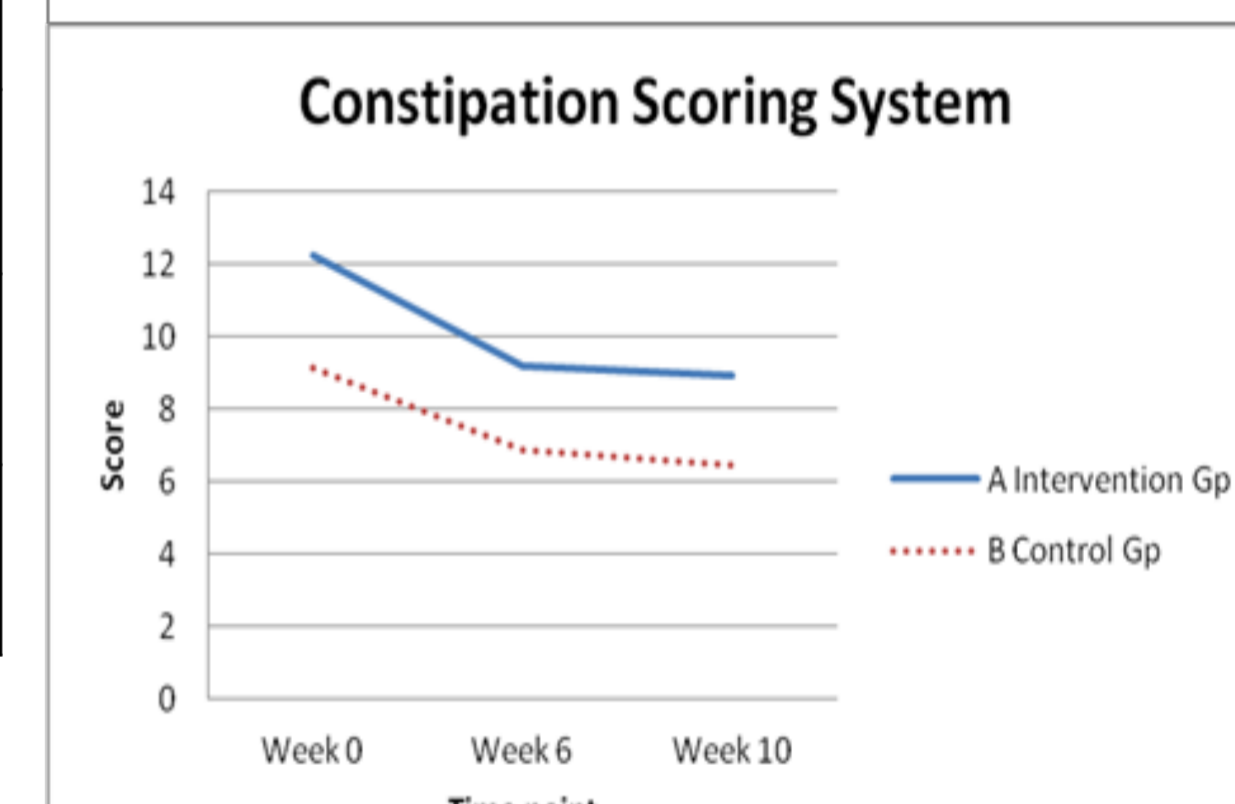
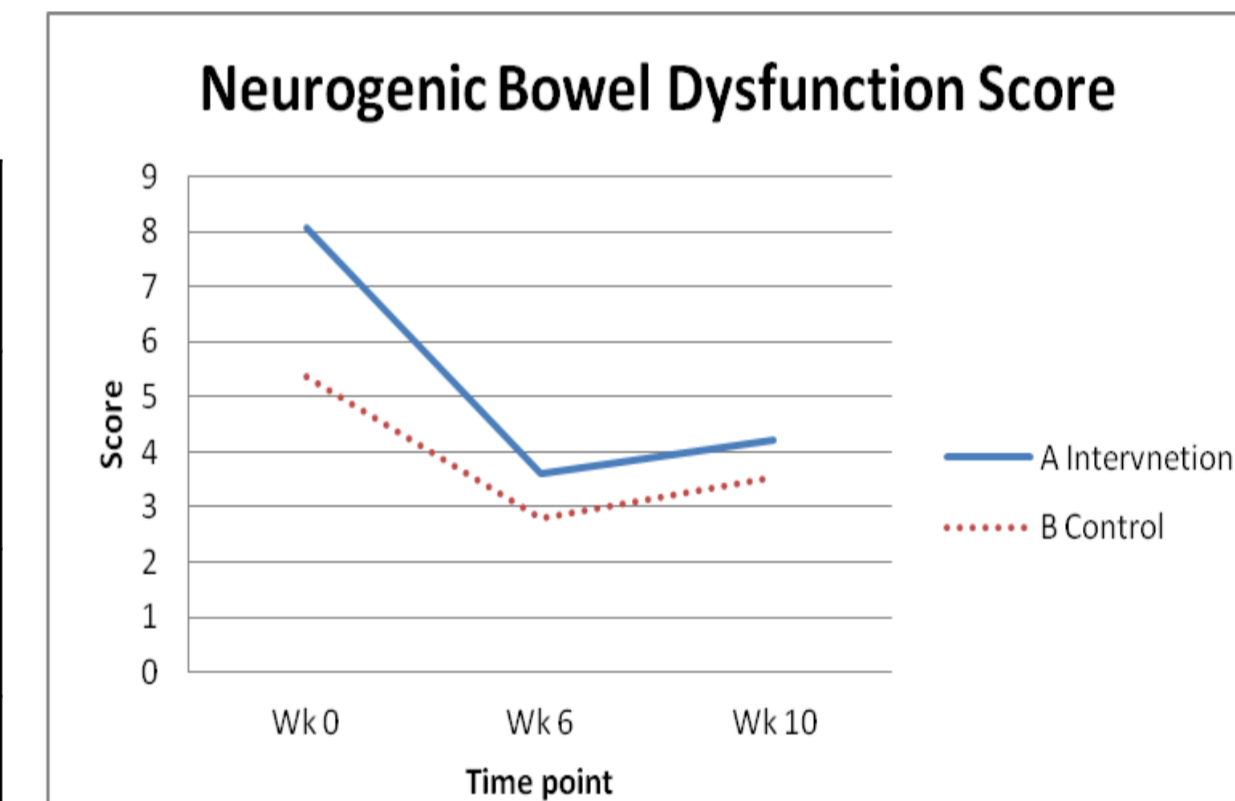
Interview Sample

Purposeful sample of both groups

Results

	Intervention Group n=16	Control Group n=16
Demographics		
Gender	4 female, 12 male	3 female 13 male
Age	72.2 (SD 7)	72.4 (SD 7)
Hoen and Yahr	2.50 (SD .966)	2.38 (SD .885)
Baseline Constipation Score System	12.25 (SD 4.058)	9.13 (SD 5.488)
Baseline Neurogenic Bowel Dysfunction Score	8.06 (SD 4.711)	5.38 (SD 4.031)
Baseline Gastrointestinal Rating Scale	34.37 (SD 10.996)	28.88 (SD 12.785)

	Intervention Group			Control Group		
	\bar{x} , SD	\bar{x} , SD	\bar{x} , SD	\bar{x} , SD	\bar{x} , SD	\bar{x} , SD
Constipation Score System	12.25, 4.05	9.2, 4.75 .021	8.92, 4.7 .016	9.13, 5.488	6.86, 4.91 .006	6.45, 5.02 .001
Neurogenic Bowel Dysfunction Score	8.0, 4.7	3.6, 2.69 .003	4.2, 3.49 .007	5.38, 4.031	2.80, 2.70 .101	3.54, 2.69 .347
Gastrointestinal Rating Scale	34.37, 10.99	26.86, 12.71 .089	24.3, 6.56 .008	28.88, 12.78	22.60, 6.24 .111	24.45, 5.22 .371



Discussion

From undertaking the study we can refine the protocol, determine the most appropriate outcome measures and sample size for an RCT. From this small pilot study it would appear that the symptoms of constipation may be reduced by providing advice. However, the intervention group, who were additionally advised to undertake the massage, did, in most domains report greater improvement (but not significantly) than those in the control group. Symptoms, where there was an indication of improvement included a reduction in time spent defaecating, pain, discomfort, dependence on laxatives, and increased completeness of evacuation.

Conclusion

We have established that such a study is feasible within the Parkinson's population. Valuable knowledge has been gained which will allow us, in a future study, to provide robust evidence on the benefits or otherwise of abdominal massage

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