Introduction

People with MS commonly suffer from pain. Overall prevalence is 65% and up to 80% experience significant pain due to the disease course. Neuropathic pain in particular is often difficult to treat, and may be related to the disordered sensory processing of pain. 

Electrotherapy can contribute to the management of MS pain in MS patients.

Methods

People who presented in the MS nurses’ clinic with pain were screened for suitability and offered the chance to participate in an 8-week trial. This involved using an APS Therapy micro-current machine, 3 x week, for 4 x back to back 8 minute electrode placements (=40 mins approx) After training, around 70% of patients were self-managing, and 30% of people required full teaching. Few patients declined to continue. Pain was measured using the Visual Analogue Scale (VAS) for ‘usual’ and ‘worse’ level, prior and at week 8. In year 2, we added the Brief Pain Inventory (BPI) and Profile of Mood States Inventory. However, study only examined data kept for the duration. 

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Average reduction in pain

<table>
<thead>
<tr>
<th>Pain</th>
<th>Mean average VAS before</th>
<th>Mean reduction</th>
<th>Mean average VAS after</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usual Pain</td>
<td>5</td>
<td>3.22</td>
<td>2</td>
</tr>
<tr>
<td>Worst Pain</td>
<td>8.01 After</td>
<td>3.23</td>
<td>4.78</td>
</tr>
</tbody>
</table>

Sample results by pain area

<table>
<thead>
<tr>
<th>Pain</th>
<th>Mean average VAS before</th>
<th>Mean reduction</th>
<th>Mean average VAS after</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joint pain and injury</td>
<td>8.24 Mean VAS 8.24 (SD = 13.27)</td>
<td>7.81 Mean VAS 2.43 (SD = 11.33)</td>
<td>1.81 Mean VAS 1.81 (SD = 7.41)</td>
</tr>
<tr>
<td>Neuropathic pain in feet and legs</td>
<td>8.16 Mean VAS 8.16 (SD = 10.27)</td>
<td>8.08 Mean VAS 7.28 (SD = 10.44)</td>
<td>0.8 Mean VAS 0.8 (SD = 3.81)</td>
</tr>
<tr>
<td>Other neuropathic pain</td>
<td>8.11 Mean VAS 8.11 (SD = 10.27)</td>
<td>8.11 Mean VAS 6.02 (SD = 11.44)</td>
<td>2.1 Mean VAS 2.1 (SD = 3.81)</td>
</tr>
</tbody>
</table>

Discussion

33 participants were able to initiate or withdraw from analgesic medication as a result of APS Therapy treatment, resulting in improved wellbeing. APS Therapy offers an additional, non-pharmacological approach to pain management in people with MS. Adherence to medication changes was avoided where possible during the trial period, (except for the induction or withdrawal of analgesics). The introduction of other new therapies or treatments (eg physiotherapy, medication changes) was avoided where possible during the trial period, (except for the induction or withdrawal of analgesics) but not banned. 

Neuropathic pain in particular is often resistant to treatment, or hard to resolve. The mode of action of MS Therapy is not fully understood. It has been postulated that by exploiting action potentials, the removal of inflammatory products is assisted, providing relief of nociceptive pain.

Participants in this study, most of whom had MS, had a significant reduction in pain using APS Therapy in 78% of cases. The therapy was safe, and in some cases reducing and discontinuing analgesic drugs as a result. We hope that the publishing of our pilot study of an APS Therapy service in the context of available research on the subject, we can stimulate further, robust clinical research, and practical use.

Acknowledgements & Disclosures

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