Utilization of chiropractic services in patients with osteoarthritis at a publically funded healthcare facility in Canada

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INTRODUCTION

- Osteoarthritis (OA) is one of the most prevalent and disabling musculoskeletal diseases worldwide (1)
- Burdens of OA associated pain may disproportionately impact socioeconomically disadvantaged populations (2)
- Preliminary evidence suggests that chiropractic management may alleviate OA related pain in the short term (3)
- We retrospectively analyzed data from a community-based clinic that offers publicly funded chiropractic care for the inner-city population in Winnipeg, Manitoba, Canada

METHODS

- 76 patients diagnosed with OA who visited the Mount Carmel Clinic from January 2011 - August 2018
- Patients were adults (M=56.7 years of age), primarily identified as female (64.5%), were considered obese (BMI M=33.9 kg/m²)
- Primary outcomes were numeric pain scores (NRS) of each spinal and extremity region at baseline and discharge, and a change score was determined

OBJECTIVE

- To explore the potential relationship of a course of chiropractic care to spine and extremity pain in patients diagnosed with OA

RESULTS

Table 1. Pain score comparison between baseline-discharge visits

<table>
<thead>
<tr>
<th></th>
<th>Baseline M(SD)</th>
<th>Discharge M(SD)</th>
<th>Point Change</th>
<th>% Change</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>7.00 (2.69)</td>
<td>4.27 (2.55)</td>
<td>-2.73</td>
<td>-39.0</td>
<td>0.01</td>
</tr>
<tr>
<td>TS</td>
<td>7.58 (2.42)</td>
<td>4.97 (2.82)</td>
<td>-2.61</td>
<td>-34.4</td>
<td>0.003</td>
</tr>
<tr>
<td>LS</td>
<td>7.73 (2.12)</td>
<td>5.14 (2.64)</td>
<td>-2.59</td>
<td>-33.5</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>SI</td>
<td>7.94 (2.28)</td>
<td>5.03 (2.76)</td>
<td>-2.91</td>
<td>-36.6</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Ext</td>
<td>7.68 (1.97)</td>
<td>4.84 (2.84)</td>
<td>-2.84</td>
<td>-37.0</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Note: a minimally clinically important difference (MCID) for chronic musculoskeletal pain is 2-points on an NRS pain scale (4)

Figure 1. Mean Patient Reported NRS Pain Scores by Body Region

DISCUSSION

- Statistically significant improvements that exceed a clinically meaningful difference in NRS scores were shown by point change reductions from baseline to discharge visits
- Change scores exceeding a minimally clinically important difference of “2-points” were observed in each anatomical region
- Future research should explore a course of chiropractic care on the disability, function, and quality of life in individuals with OA

CONCLUSION

- Socioeconomically disadvantaged patients with OA showed reductions in mean pain scores in a clinically and statistically significant manner concurrent with a course of chiropractic care

REFERENCES

5. Childs JD, Piva SR, Fritz JM. Responsiveness of the numeric pain rating scale i...