Chapter 9:
Physiotherapy Modalities:
Ancillary and Preparatory to the Chiropractic Adjustment

Introduction

Physical modalities utilized in healthcare can be traced back from Hippocrates around 400BC, and Galen, who was considered the “Father of Sports Medicine”, as he treated the Roman gladiators circa 200AD (6). Since, the dichotomy within the healing arts between physical modalities of treatment and chemical modalities has taken turns in dominance throughout history.

The introduction of physiotherapy within the United States can be best associated with two phenomena within American history. The first of these events being the epidemics of poliomyelitis during the 1800’s through the 1950’s, and the onset of World War I and World War II (4). These two events left patients with unique symptoms and impairments that responded in a superior manor to physical modalities such as exercise, hydrotherapy and massage; rather than the conventional medical treatments at that time.

Chiropractic Physiotherapy is defined as such:

“Chiropractic physiologic therapeutics encompasses the diagnosis and treatment of disorders of the body using the natural forces of healing, such as air, cold, electricity, rest, exercise, traction, heat, light, massage, water and other forces of nature.” (This is the ACA definition so may want to replace with an ICA or more neutral one)(2).

The use of physical modalities within chiropractic, as well as within the physical therapy profession, has occurred concomitantly. Within chiropractic, physiotherapy modalities can be seen early in the profession’s history. While some postulate that physiotherapy in chiropractic practice can be traced back to D.D. Palmer’s magnetic healing practice which incorporated a sort of “massage”(5). A more deliberate union was made in 1914 when National Chiropractic College incorporated physiotherapy in its program(1). Photos of the B.J. Palmer Chiropractic Research Clinic, circa 1945, show a state of the art rehabilitation lab containing the latest physiotherapy equipment of the time(5). Since, chiropractic has enjoyed the benefit of including physiotherapy into their scope of practice.

The types of modalities utilized in physiotherapy have been scrutinized for their lack of “evidence” in the past. As a result the American Physical Therapy Association (APTA) has created “Hooked on Evidence”. This program, in association with “Vision 2020”, and 187 Doctor of Physical Therapy (DPT) programs countrywide are an attempt by the physical therapy profession to gain autonomy and direct access privileges in the ever-growing market for physical medicine utilization(3). It is critical that the chiropractic profession stakes its claim to this area of professional overlap in a way that is defined and substantiated.

In the new era of “evidence-based” chiropractic practice, it is imperative that the profession remain vigilant in the appraisal of the scientific literature as it pertains to chiropractic practice. This is especially crucial when ascribing validity to the various modalities.

Several decades ago, the Board of Directors of the International Chiropractors Association (ICA) voted to include a variety of physiotherapy modalities as used by chiropractors. These procedures were accepted if their use was “ancillary or preparatory” to the chiropractic spinal adjustment. While the major method of chiropractic care, recognized by the ICA, is the chiropractic spinal adjustment, the ICA realizes that certain modalities, when used in conjunction with the adjustment, may enhance healing and reduce the suffering of chiropractic patients.
While it is difficult to determine the current evidence for each modality used by chiropractors, several of the most common physiotherapy modalities were searched within the Medline Database. As discussed in previous chapters, there are four major levels of evidence recognized by the United States Department of Health and Human Services:

- **Level 1.** Randomized controlled/clinical trials—includes quasi-randomized processes such as alternate allocation.
- **Level 2.** Non-randomized controlled/clinical trial—a prospective (pre-planned) study, with predetermined eligibility criteria and outcome measures.
- **Level 3.** Observational studies with controls—includes retrospective, interrupted time series (a change in trend attributable to the intervention), case-control studies, cohort studies with controls, and health services research that includes adjustment for likely confounding variables.
- **Level 4.** Observational studies without controls (e.g., cohort studies without controls, case series without controls, and case studies without controls).

Before discussing the Levels of Evidence for each common modality, Table 1 is provided as a summary of the evidence for each one.

**Table 1**

<table>
<thead>
<tr>
<th>Modalities</th>
<th>Level I</th>
<th>Level II</th>
<th>Level III</th>
<th>Level IV</th>
<th>Total Number of References</th>
<th>Rating</th>
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<td>2</td>
<td>6</td>
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<td>3. Superficial Heat +</td>
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<td>9</td>
<td>B</td>
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<td>1</td>
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<tr>
<td>5. Therapeutic Exercise +</td>
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<td>13. Yoga +</td>
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<td>15. Extension Traction +</td>
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<td>17. Scoliosis Specific Exercises +</td>
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</table>

Discussion:

Cold/Cryotherapy:

Positive:
Level 1: References:


Level 2-3: (0 references)

Level 4:


Cold/Cryotherapy:

Negative:

Level 1:


Level 2:


Superficial Heat:

Positive:
Level 1:


Level 2-3: (0 references)

Level 4:


**Superficial Heat:**

**Negative:**

**Level 1:**

Level 2-4: (0 references)

Therapeutic Exercise:

Positive:

Level 1:


Level 2:


Level 3:


Level 4:


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### Therapeutic Exercise:

**Negative:**

**Level 1:**


**Level 2-3:** (0 references)

**Level 4:**


### Low Level Laser:

**Positive:**

**Level 1:**


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Level 2:

Level 3:


Level 4:


Low Level Laser:

Negative:

Level 1:


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**Level 2-4:** (0 references)

**TENS:**

Positive:

**Level 1:**


Level 2:


Level 3:


Level 4:


---

**TENS:**

Negative:

**Level 1:**


Level 2-3: (0 references)

Level 4:


Whole Body Vibration

Positive:

Level 1:


Level 2: (0 references)

Level 3:


Level 4:


Whole Body Vibration:

Negative:
Level 1-3: (0 References)

Level 4:


Yoga:

Positive:

Level 1:


Level 2:


Level 3:


Level 4:


Yoga:

Negative:

Level 1:


Level 2-4: (0 References)
Extension Traction:

Positive:

Level 1:


Level 2:


Level 3: (0 references)

Level 4:


Fedorchuk C. Case Report: Treatment and Recovery of a Patient Suffering From Muscular Dystrophy, and Hypertension Utilizing Chiropractic Care. JVSR 2008; No.26:5-6.


Extension Traction:

Negative:

Level 1-4: (0 References)
Scoliosis Specific Exercises

Positive:

Level 1:


Level 2:


Negrini S, Atanasio S, Fusco C, Zaina F. Effectiveness of complete conservative treatment for adolescent idiopathic scoliosis (bracing and exercises) based on SOSORT management criteria: results according to the SRS criteria for bracing studies - SOSORT Award 2009 Winner. Scoliosis. 2009 Sep 4;4:19


Level 3:


Level 4:


Negative:

Levels 1-4: (0 references)

References

5. Peterson D, Wiese G: Chiropractic: An Illustrated History, 1985

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