INTRODUCTION

Patients with Complex Regional Pain Syndrome (CRPS) have a multifaceted syndrome which manifests as pain, allodynia, hyperesthesia, abnormal vasomotor activity, edema, movement dysfunctions, dysautonomia, atrophy, and abnormal sudomotor activity.1

CRPS is categorized into types:
- Type 1 has vasomotor signs and symptoms, formerly noted as Reflex Sympathetic Dystrophy.
- Type 2 has neurological signs and symptoms, formerly called Causalgia.
- Type 3 is a combination of vasomotor and neurological signs and symptoms. Onset: Secondary to direct trauma or caused by indirect trauma such as a Myocardial Infarct or Spinal Cord Injury

Symptoms:  
- Exaggerated burning sensation
- Pain begins locally
- Pain spreads to regional distribution
- Pain is more intense than expected
- Pain is inconsistent with mechanism of injury

Physical Therapy is a “cornerstone” in the treatment of patients with CRPS Type 1 and an estimated 90% of pain specialists refer their patients to physical therapists.1 No consensus between physical therapists exists for best treatment even though therapeutic guidelines2 are available. Interventions are many and varied and fall loosely into categories of movement, modalities, desensitization and biofeedback. Most interventions are combinations of all categories.4

METHODS AND PURPOSE

Hypothesis: Trends of treatment would be consistent between physical therapists regardless of years of practice, geographical location and specialization certifications.

Purpose: To determine usual interventions selected by physical therapists in the management of CRPS.

METHODS

Members of the Orthopedic Section of the APTA who practiced within Medicare Region B (Figure 1) were surveyed. A total of 1,409 subjects were randomly selected from 2,522 members. Approval by the Michigan University - Flint Internal Review Board was received prior to initiation of the study. In order to complete the survey, subjects must have treated at least one patient with CRPS

An initial postcard included an invitation to complete the survey online using Zoomerang™. Two weeks later, a second postcard including the same information was sent as a reminder. Letter of intent and informed consent documents were located on the initial webpage of the URL. Willingness to participate and informed consent were confirmed by clicking a box on each subject's survey on the survey link.

The 24 question survey instrument was composed of closed-ended and scaled questions. In order to assess for ease of use, time to complete and general layout, the survey was piloted by four clinical faculty members at the University of Michigan – Flint Physical Therapy Department, as well as two physical therapists at the university’s Health and Wellness Center.

Once electronic surveys were completed, responses were sorted using Zoomerang™. Although a 20% response rate was anticipated, only 42 of 1,409 (3%) respondents completed the survey. From the cross tabulations, the Kendall tau-b and Pearson’s chi square were used to analyze nominal and ordinal data, respectively. The determination of significance was 0.05. Descriptive statistics were used to determine common interventions for the treatment.

RESULTS

The characteristics of respondents are described in Table 1.  
- Physical therapists surveyed tend to use movement interventions over desensitization interventions. Figure 2 lists the commonly used and rarely used interventions. 
- Patients with CRPS receive interventions two to three times per week for greater than 12 weeks.
- 84% of physical therapists surveyed reported that the majority of their patients with CRPS concurrently receive other treatments from pain management specialists.
- 46% use movement techniques including joint mobility, active and passive range of motion (AROM/ROM), active exercise (AE) and aerobic exercise (AE) the majority of the time.

- 77% of respondents reported using transcutaneous electrical stimulation (TENS) and 44% reported using intermittent current (IC) more than half of the time.

Figure 2: Commonly and Rarely Used Interventions

Discussion

In 2003, Green conducted a systematic review to examine the effectiveness of physical therapy interventions for patients with CRPS. The results suggested that exercise, mirror feedback, motor imagery, relaxation techniques, acupuncture, electrotherapy, and combined treatment programs may alleviate signs and symptoms.1 Derriems et al in 2003 surveyed physiotherapists from the Netherlands to determine the most commonly used interventions. Exercise, patient education, TENS and massage were reported as being the interventions of choice.

REFERENCES