Physical Therapy in an Interdisciplinary Pain Management Center

Patients with chronic pain conditions are frequently referred to interdisciplinary treatment settings. Several studies support that such programs are cost-effective and assist in reducing pain, pain-related depression and anxiety, healthcare utilization, and medication use, while increasing return to work, physical abilities, and quality of life (1-5).

Interdisciplinary programs are recommended for persons with nearly any chronic pain condition, including complex regional pain syndrome, chronic whiplash pain, orofacial pain, headaches, and low back pain (6-10). Friction suggested that failure to match the management program with the complexity of the patient’s situation through a team approach may lead to failure to resolve the pain and perpetuation of a chronic pain syndrome (11).

Physical therapy has been described as one of the pillars of pain management programs. This article explores various aspects of physical therapy management in an interdisciplinary setting.

Although there appears to be consensus that physical therapy is an integral component of pain management centers, few physical therapists have received adequate training in clinical pain mechanisms and pain management strategies, which is somewhat remarkable considering that the chronic pain prevalence is estimated to range from 10% to 55% (12). The International Association for the Study of Pain (IASP) has developed a specific pain curriculum for occupational and physical therapy education (http://www.iasp-pain.org/ot-pt_toc.html), yet there is no evidence that this or similar curricula are commonly taught in physical therapy academic programs (13). It should then come as no surprise that many physical therapists lack knowledge on pain management and may not be all that interested in working with persons with chronic pain (14).

According to Wolff and colleagues, 96% of orthopedic physical therapists prefer to work with patients who are not likely to have chronic pain (15). A search of the membership directory of the Orthopedic Section of the American Physical Therapy Association (APTA) suggests that its Pain Management Special Interest Group has less than 400 physical therapy members out of a total APTA membership of about 64,000, which equates to approximately 0.6 percent (from “members only” section of http://www.orthopt.org, accessed October 30, 2004). A similar search of the membership directory of the American Academy of Pain Management suggests that there are less than 100 identifiable physical therapy members out of a total of approximately 6,000 members (less than 1.7 percent) (http://www.aapainmanage.org/search /MemberSearch.php, accessed October 30, 2004). The apparent lack of professional interest and insufficient education and knowledge in pain mechanisms and pain management strategies can create multiple challenges for physical therapists to become effective pain management clinicians.

In most interdisciplinary teams, the different roles of physicians and physical therapists are clearly defined. Physicians tend to be the initial contact with the patient. They establish medical diagnoses, prescribe and manage pain medications, handle flare-ups, and oversee other services, including physical therapy and psychology (16). Physical therapists tend to focus more on manual therapy, movement therapies, functional training, including spinal stabilization exercises, posture training, and physical conditioning (17). However, there are
some areas where the roles of physicians and physical therapists can overlap significantly. Physicians with training in osteopathic medicine may overlap in their treatments with manual physical therapists, as both may be administering spinal and peripheral mobilizations and manipulations. Both physicians and physical therapists may have training in administering dry needling and trigger point injections. Traditionally, only physicians are allowed to administer trigger point injections. However, dry needling is within the scope of physical therapy practice in Maryland, Virginia, South Carolina, New Mexico, Georgia, and New Hampshire. Physical therapists in Maryland may perform trigger point injections as well (18). Physical therapists tend to see patients more frequently than physicians and therefore, implement manual procedures and, where allowed, dry needling more often.

Prior to the patient’s follow up visit with the physician, good communication between team members is essential. The treating physician should be familiar with the treatments and treatment objectives of the physical therapist. All members of the treatment team, which should always include the patient, have to work together to achieve the goals and objectives (19, 20). Good communication facilitates sharing of pertinent findings and avoids duplication of services. Clinicians may have to learn effective communication skills and techniques, as few medical and physical therapy schools teach students how to interact in interdisciplinary teams (21).

Physical therapists experienced in working with persons with chronic pain agree that treatment strategies used with acute injuries have little utilization in chronic pain conditions (22). Unfortunately, the Guide to Physical Therapy Practice (the guide), a prominent APTA publication, provides limited guidance in determining the best physical therapy approach for persons with chronic pain conditions (23). The guide does not recognize chronic pain as a specific disease, diagnosis, or musculoskeletal pattern. Chronic pain is associated with peripheral and central sensitization rather than with tissue damage (24). In chronic pain conditions, pain is hardly a reliable indicator of what is happening in the tissues where patients may experience their pain (25). For example, many patients present with referred pain in which the location of the pain complaint is distant from any nociceptive pain generator. Myofascial trigger points are thought to be a common source of persistent nociceptive input into the spinal dorsal horn. New hypotheses are in progress explaining possible underlying mechanisms of persistent pain that may serve as the basis of physical therapy intervention (26, 27). Chronic pain is characterized by both nociceptive and non-nociceptive (cognitive-evaluative) mechanisms (25). In their work with persons with chronic pain, physical therapists must address both mechanisms.

Physical therapy in pain management settings consists of two distinct but overlapping phases. During the first phase, therapists emphasize the nociceptive component of the chronic pain problem. Reduction in pain report is the main goal. Physical therapists may employ manual trigger point therapy, dry needling of myofascial trigger points (where legally allowed), or other manual therapy approaches, and emphasize posture training, and early improvement in physical functioning.
Physical therapy may also include relaxation exercises, hypnosis, or breathing exercises to further reduce nociceptive input (28). Moseley emphasized that "...any strategy that has an inhibitory effect on nociceptive input is probably appropriate in the short term unless it simultaneously activates non-nociceptive threatening input" (25). Non-nociceptive mechanisms of chronic pain are best addressed through patient education. Studies have shown that patients with chronic pain gain much understanding when physical therapists explain the physiologic principles of sensitization rather than emphasize anatomical concepts such as spinal mechanics (29, 30). Butler and Moseley's "Explain Pain" is an excellent resource for patient education (31). Good education can reduce disability as it assists patients in making choices, overcoming unhelpful beliefs, and modifying behavior, such as increasing activity and exercise (29, 32). Fortunately, many persons with chronic pain fail to accept that a tissue-based diagnosis would explain their pain, the severity of their pain, and the consequences of their pain on their lives (32). By adopting a broader biopsychosocial model that incorporates new insights in the pain sciences, psychology, pain philosophy, and the movement sciences, physical therapists are indeed a core component of collaborative interdisciplinary team approaches to effectively manage chronic pain. Physical therapy education should include instruction in pain sciences and pain management.

During the second phase, the focus shifts to further improving physical function and reducing disability. Two skills essential for successful rehabilitation are self-pacing during activity and setting appropriate and achievable goals (32). Activity goals should address physical goals (specific exercise programs), functional goals (ADL, work, recreation), and social goals (ability to visit friends or to go to a concert) (32).

Occasionally, physical therapists may experience resistance from physicians with little or no background in manual medicine. An orthopedic physical therapist may have studied advanced manual therapy courses and conclude that a particular patient likely has zygapophyseal joint dysfunction. The physician may not be familiar with manual assessment skills and techniques, and believe that zygapophyseal joint pain can only be confirmed with facet blocks. The physician may dismiss the physical therapy findings and treatment recommendations, even though there is evidence that well-trained manual therapists not only can accurately determine joint dysfunction, but can offer effective treatments as well (33, 34). On the other hand, physical therapists may have limited understanding of the use of narcotics in the management of persons with chronic pain conditions, and question why physicians prescribe multiple narcotics, anti-depressants, and even anti-convulsants (35).

Familiarity and appreciation of each other's contributions and professional insights will benefit patients and strengthen the work environment. In the author's pain management center, physicians and physical therapists frequently consult with each other. For example, physicians may call upon physical therapists to assist in the diagnostic process. Physical therapists may observe signs and symptoms suggestive of metabolic insufficiencies, such as hypothyroidism, and consult with physicians regarding medical management. By working together, all clinicians have an opportunity to learn from each other and become more effective pain management providers.

Physical therapists can also benefit much from interactions with mental health professionals. Most patients in pain management centers present with a combination of physical findings and psychosocial issues (36). In general, physical therapists are poorly prepared to tackle the multiple complexities of persons with chronic pain. Psychologists or clinical social workers are essential members of multidisciplinary teams,
who can share much valuable information about patients, offer clinical guidance, and provide specific training for other team members. For example, physical therapists are usually not aware of the concepts of transference and counter-transference, although these concepts are well-defined in the psychotherapy and psychiatric literature both as a phenomenon and therapeutic tool. The most recent article on this subject in Physical Therapy, the APTA journal, dates back to 1977 [37]. While there are many definitions, transference can be defined as “the unconscious attempt by a patient to recapitulate with the therapist types of interpersonal interactions similar to those he experienced with significant persons in the past.” Counter-transference can be defined as “the feeling of the therapist for the patient based on experiences in the therapist’s past.” Awareness of transference and counter-transference is critical for health care providers in their interactions with pain patients. Psychotherapists can also give useful insights in patients’ self-efficacy, readiness to change, psycho-social background, cultural considerations, and so on [38-40].

Physical therapists are indeed essential to the collaborative interdisciplinary approach required for effective pain management. Hopefully, pain sciences will become standard in all physical therapy curricula to better prepare future physical therapists to become more effective pain management specialists.

References
19. Garvin, RD, Management of persons with chronic pain, in Management of Persons with chronic Neurologic Disease, M.N.
Outcomes Measurement

The Pain Outcomes Profile

Documents and tracks patient progress across treatment for
- Pain Intensity
- Mobility
- Activities of Daily Living
- Vitality
- Negative Affect
- Fear

ORDER FORMS FOR THE POP STARTER KIT ARE AVAILABLE TO DOWNLOAD FROM WWW.AAPAINMANAGE.ORG
CONTACT ALEXANDRA CAMPBELL, PHD IF YOU ARE INTERESTED IN PARTICIPATING IN RESEARCH REGARDING THE PAIN OUTCOMES PROFILE.

American Academy of Pain Management • 13947 Mono Way #A • Sonora, CA 95370 • Phone: 209-533-9744
Fax: 209-533-9750 • e-mail: alex@painmanage.org • www.aapainmanage.org

36 The Pain Practitioner, Winter 2004