

## Original Article

# Regenerative Injection Therapy and Neural Therapy and their Roles in the Treatment of Chronic Pain

Robert Banner MD, CCFP, FRCP(C)

Assistant Professor, Department of Anesthesiology and Perioperative Medicine, University of Western Ontario Pain Program Schulich School of Medicine and Dentistry, St. Joseph's Health Centre, London, ON; robert.banner@sjhc.london.on.ca

The late Dr. James Cyriax placed emphasis on the following:

1. All pain has a source,
2. Treatment must reach the source,
3. The treatment must benefit the source.

Many times the patient whom we see has a complicated history. If the patient and we are fortunate, it involves pain at only one location, i.e. low back pain. Even so, there can be many etiologies. In order to successfully treat the patient, we must identify as many areas of concern that we can and treat them all. For too long, we have each focused on our area of expertise to the exclusion of other possibilities. If we have recognized another colleague may have a role to play, we don't know if such a referral is appropriate or timely and how it would fit in with what we are doing. These challenges can be overcome with an open mind and willingness to work together for the benefit of our patients/clients.

Low back pain is the fifth most common reason for all physician visits<sup>1</sup> and the second most common symptomatic reason for a person to visit their doctor (upper respiratory symptoms are first). Fifty to eighty percent of adults experience low back pain<sup>2</sup>. In the United States, it is the leading cause of disability, with associated direct and indirect costs estimated to exceed \$50 billion per year<sup>3</sup>. Despite the widespread opinion that 75 - 90% of patients with acute low back pain recover within about 6 weeks irrespective of their treatment<sup>4</sup>, pain may persist in up to 72% and disability in up to 12% of patients 1 year after their first episode of low back pain.

For a Canadian perspective, Dr. Brian Drew, orthopedic surgeon and medical director of the Spine Unit, Hamilton General Hospital recently presented at the Ontario Medical Association Section on Sport Medicine conference in January 2006 in Toronto. He told delegates that low back pain is a major public health problem. In fact, he stated that "It's the leading cause of disability for people under age 45, the second leading cause for physician visits, the third most common cause for surgical procedures and the fifth most common reason for hospitalization". Persistent chronic pain is an escalating public health problem currently affecting fully 20-30% of Canadians<sup>5</sup>.

A recent case report using two "alternative/comple-

mentary" therapies highlights how the use of manual orthopedic physical therapy, regenerative injection therapy (RIT) and neural therapy (NT) were helpful in decreasing pain and improving function in a patient with "failed back surgery". I hope that a brief explanation of RIT and NT will be instructive and demonstrate how these treatments, when indicated, can be directed at the sources of a patient's pain to enhance their overall care.

### Regenerative Injection Therapy (Prolotherapy)

Alternative treatments for chronic pain include a huge variety of therapies. One such therapy is called Regenerative Injection Therapy (RIT / Prolotherapy). RIT describes a procedure for strengthening lax ligaments by injecting proliferating agents directly into torn or stretched ligaments or joints to create new healthy ligament of increased tensile strength.

A position paper of the Florida Academy of Pain Medicine (FAPM) reviewed literature from 1937 through 2000.<sup>6</sup> More than 40 authors reported case studies, retrospective, prospective and animal experiment studies that evaluated the results of treatment with prolotherapy. The calculated number of patients reported in those studies exceeded 530,000. Improvement in terms of return to work and resumption of previous functional/occupational activities was reported in 48% to 82% of all patients. The findings of the FAPM substantially contrasts with the position of the Department of Health and Human Services (Florida), Florida Workmen's Compensation, and Medicare guidelines. The FAPM recommends consideration of the use of prolotherapy as a type-specific treatment of post-traumatic degenerative, overuse and painful conditions of the musculoskeletal system related to pathology of the connective tissue. They concluded that current literature supports manipulation under local anesthetic and a series of regenerative injections. Also stated, is that the use of prolotherapy in an ambulatory setting is an acceptable standard of care in the community.

A search of the literature through June of 2005 reveals there have only been 5 placebo-controlled randomized, double-blind trials of prolotherapy, four of which have found positive effects.<sup>7,8,9,10,11</sup> The first of these studies appeared in the July 1987 issue of the *Lancet* and exam-