

PATIENT EDUCATION AND SELF-ADVOCACY: QUESTIONS AND RESPONSES ON PAIN MANAGEMENT

Edited by Yvette Colón

Prolotherapy

Amitabh Goswami

ABSTRACT

Questions from patients about analgesic pharmacotherapy and responses from the authors are presented to help educate patients and make them more effective self-advocates. The topic addressed in this issue is prolotherapy and a discussion and its history, types, indications, side effects and treatments.

KEYWORDS proliferative therapy, prolotherapy, regenerative injection therapy, tendonopathy

QUESTION FROM A PATIENT

I'm an active 45-year-old woman with on-and-off low back pain for the past 2 years. The pain has been getting much worse. I have tried all the usual remedies without success. My friend mentioned a treatment call prolotherapy. How does it work and would it be effective for my back pain?

ANSWER

Prolotherapy as defined in Webster's *Third New International Dictionary* is "the rehabilitation of an incompetent structure, such as a ligament or tendon, by the induced proliferation of new cells."¹ Prolotherapy involves the injection of solutions at the point at which tendons and ligaments attach to the bone, to cause an inflammatory reaction. Inflammation starts the regeneration and repair of the injured tissue in and around the joint to promote tissue repair or growth. It can be used years after the initial pain or problem began, as long as the patient is relatively healthy.

Many different types of musculoskeletal injuries and pain (e.g., low back and neck pain,

chronic sprains/strains, whiplash injuries, tennis and golfer's elbow, osteoarthritis, and chronic tendonitis/tendinosis) potentially can be treated with prolotherapy.²

History

The concept of creating irritation or injury to simulate healing was described as early as the fifth century BC. During this time, Hippocrates (460–370 BC) treated unstable joints by poking the ligaments with a hot metal rod.³ Although the procedure was rudimentary and experimental, Hippocrates hypothesized that causing inflammation of injured ligaments would lead to self-repair. This was one of the first steps towards using the body's own healing mechanism to repair connective tissues.

In the 1940s, a trauma surgeon in Ohio, George S. Hacket, MD, expanded the concept of tendon (connects muscle to bone) injury and ligament (connects bones to other bones) looseness to chronic musculoskeletal pain. He was the first to coin the term "prolotherapy." The name prolotherapy comes from the word "proli-" (Latin) meaning offspring; "proliferate"—to produce new cells in rapid succession.^{4–6}

Epidemiology

The incidence of musculoskeletal pain is rising in epidemic proportional across the globe. In the United

Amitabh Goswami, DO, MPH, is a Pain Medicine Fellow, Department of Anesthesiology and Pain Medicine, University of California at Davis Medical Center, Sacramento, California, USA.

Address correspondence to: Dr. Amitabh Goswami, UC Davis Medical Center, Lawrence J. Ellison Ambulatory Care Center, 4860 Y Street, Suite 3020, Sacramento, CA 95817, USA (E-mail: painfellowship@ucdmc.ucdavis.edu).

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