

Postsurgical Rehabilitation Protocols When the "Evidence" Is Limited

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Guest Editorial

In this issue of *JOSPT*, an example of a rehabilitation protocol developed based on information derived from basic scientific research and previous clinical experience is published.⁵ This article demonstrates the important responsibility that we have as physical therapists and providers of postoperative rehabilitation to apply knowledge gained from basic research to help develop effective and safe rehabilitation programs when new surgical interventions and information about the "optimal" rehabilitation protocol are not yet available.

The influx of patients into physical therapy clinics in the early 1990s, following application of thermal energy to selectively shrink the glenohumeral joint capsule and decrease capsular volume, provided a substantial challenge to those practicing in orthopaedic and sports physical therapy. With little basic scientific information and virtually no short- or long-term outcome data, physical therapists were tasked with providing high-level rehabilitation for patients who had undergone a thermal capsulorrhaphy procedure performed as an adjunct to traditional arthroscopic treatment of glenohumeral joint instability and rotator cuff disease. Initially, optimal immobilization times and rate of range of motion and strength-training progressions were extrapolated from clinical experience and other postoperative rehabilitation protocols. The evolution of these early rehabilitation protocols and careful progression of patients following the advent of this new surgical procedure, coupled with the publication of orthopaedic basic science research, has led to a better understanding of the rehabilitation process and the development of revised treatment protocols, such as the one published by Wilk et al⁵ in this issue.

The treatment protocol presented by Wilk et al⁵ carefully applies basic science research and objective parameters such as range of motion measurement, humeral head translation assessment, and objective strength data to the progression of patients following thermal capsulorrhaphy. Research recently published by Hecht et al,² demonstrating the acute effects on capsular tissue following thermal application, guides the protected motion and strengthening phases recommended in postoperative rehabilitation protocols. The application of this type of orthopaedic basic science research to clinical rehabilitation protocols is critically important and eloquently displayed in the clinical commentary in this issue.⁵ We, as physical therapists, have the responsibility of applying this basic research, coupled with careful clinical observation and objective data, in the development of our rehabilitation protocols.

The application of these evidence-based rehabilitation protocols (even when the evidence is derived from basic research) leads to superior patient care, and should ultimately lead to outcomes-research on groups or subgroups of patients. Initial outcomes-research following thermal capsulorrhaphy was published in *JOSPT* in 1999 and 2000,^{1,4} but these reports provided data on small samples of patients and were limited to a very short postoperative account. The addition of objective data as an adjunct to traditional outcome measures of patient satisfaction and subjective rating scales can further enhance the ultimate understanding

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of patient outcomes and expected functional levels following surgery. An excellent example of research on objective patient outcome measures is demonstrated by Trudelle-Jackson et al³ in this issue. These researchers use objective parameters such as range of motion, muscular strength, and balance, in addition to a 12-item questionnaire in the study of patients who are one year following total hip arthroplasty. Their research provides a template for future studies attempting to measure short- and long-term patient outcomes following both non- and postoperative rehabilitation.

The articles by Wilk et al⁵ and Trudelle-Jackson et al³ provide excellent examples of the role physical therapists play as leaders in rehabilitation. Developing responsible and scientifically based rehabilitation protocols and fostering outcomes-research is vitally important for the continued advancement of orthopaedic and sports physical therapy.

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