

# Tailored Treatment for Symptomatic Osteoarthritis of the Knee

Israel Dudkiewicz MD

Department of Rehabilitation, Tel Aviv Sourasky Medical Center, affiliated with Sackler Faculty of Medicine, Tel Aviv University, Ramat Aviv, Israel

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The extension of life expectancy by modern medicine has challenged the issue of life quality. Degenerative ailments such as osteoarthritis significantly restrict the daily lives of the older population. Osteoarthritis has major medical, social and economic implications and is therefore the subject of extensive ongoing research aimed at prevention and treatment. However, despite the impressive advances made there is still no definitive treatment. This issue has become even more imperative since although surgical treatment – total knee replacement – is considered a successful operation, up to 15% of patients suffer some pain after surgery even with objective good results [1]. This fact, together with the increasing numbers of TKRs that are being performed, especially in relatively young patients (under age 55), treble, and sometimes even more, the risk of revision [2].

A recent clinical review by Hochberg [3] discusses various treatment options, such as weight loss, complementary and alternative medicine, non-steroidal anti-inflammatory drugs, intra-articular therapy, and centrally acting agents. That review also updates our knowledge on monoclonal antibodies that are currently being explored as biologic agents in patients with osteoarthritis. Not infrequently the primary care physician

uses the above modalities in a trial and error manner.

One reason that makes it difficult to tailor a specific therapy for a given patient with osteoarthritis is probably because pain is elusive. In this issue of *IMAJ* Haviv and co-authors [4] review the mechanism of pain in osteoarthritis of the knee. They describe the complexity of peripheral and central interactions leading to the perception of knee pain. From a clinical point of view the review emphasizes the fact, as do other studies, that not always does a relation exist between the “illness” of joint pain and the “disease” of radiographic osteoarthritis [5,6]. They suggest evaluating the pain carefully before prescribing a treatment or referring for surgery.

A second reason for the inconsistency in treating osteoarthritic pain is patient heterogeneity. In this context Felson [7] tried to explore the existence of distinct phenotypes in osteoarthritis. He suggested, for example, that the physician differentiate between patients with dysfunctional hypersensitivity to pain and those with functional localized pain. Another suggested type includes knees with malalignment severe enough to drive the disease process. These and other subtype definitions can help in matching a more appropriate treatment for osteoarthritis.

The third reason that adds complexity to this already confusing problem is the fact that even for common treatments such as intra-articular corticosteroid injections, the optimal corticosteroid agent has not been established, and neither has its optimal dosing regimen [8]. Furthermore, even for intra-articular injections, which are considered a safe treatment, severe

adverse reaction such as septic arthritis might occur following steroid or hyaluronic acid injections, as described by Shemesh et al. [9].

In summary, the information on osteoarthritis of the knee in the medical literature is overwhelming. It would be helpful to construct a simple clinical algorithm to treat the painful osteoarthritic knee based on well-defined pain generators and patient phenotypes.

## Address for correspondence:

**Dr. I. Dudkiewicz**

Dept. of Rehabilitation, Tel Aviv Sourasky Medical Center, Tel Aviv 64239, Israel

**Phone:** (972-3) 697-3111

**Fax:** (972-3) 631-4049

**email:** Israel@dudkiewicz.com

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TKR = total knee replacement