Muscles – A Potent Treatable Pathogenic Factor in the Pain of Osteoarthritis

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Received: February 23, 2016; Published: February 23, 2016

Osteoarthritis, a highly disabling widespread progressive health condition is strongly associated with various degrees of unrelenting pain. Unfortunately pharmacologic and surgical approaches are not always efficacious, or indicated for purposes of pain relief, the symptom of most concern to patients. Moreover, even when pharmaceutical approaches appear to be indicated, adverse outcomes have been noted, particularly where pain is maximally relieved. One reason for this is that in the event muscle and its contribution to the osteoarthritic process are not treated simultaneously, the excess forces falling on the damaged joint in the presence of a reduced pain experience, may produce more extensive loading than is normally experienced, with subsequent joint damage, and additional pain. Some medications also increase the risk of articular cartilage degradation, the essential feature of osteoarthritic joint disease, and surgeries that involve cutting of muscle, and little attention to related muscular pathologies may produce persistent pain problems and/or suboptimal outcomes. Fortunately, although often believed to be an inevitable health condition with few options for pain relief, an increasing body of literature indicates osteoarthritis is a disease of the whole joint, including muscle. Consequently, in addition to traditional clinical examinations of the predominating joint signs, we propose it is important clinicians carefully examine the nature of any associated neuromuscular determinant at the outset. That is, muscle, which is amenable to intervention and can be altered pathologically and neurophysiologically in osteoarthritis, should be examined to discern specifically how one or more of these possible abnormalities such as muscle spasm, muscle atrophy, muscle inflammation, muscle pathology, and muscle contracture, may be contributing to the osteoarthritis pain cycle. Based on the successful results of a variety of strategies directed towards improving muscle function and structure in the related literature, found to significantly reduce osteoarthritis pain, with few side effects if applied judiciously, it is concluded there is growing support for the importance of identifying and treating muscle dysfunction in efforts to minimize osteoarthritis pain, and that more studies focused on addressing neuromuscular aspects of osteoarthritis will greatly facilitate efforts to heighten life quality and avert the immense long-term suffering currently experienced by the many osteoarthritis patients across the globe.

Volume 1 Issue S1 February 2016
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