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Pharmacist, Nurses and Physiotherapist and their Roles in Management of Osteoarthritis

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Abstract

Providing evidence-based therapy for older persons with Osteoarthritis (OA) through primary care physiotherapists and pharmacists led to immediate enhancements in health outcomes, decreased reliance on non-steroidal anti-inflammatory medicines, and high levels of patient satisfaction. Physiotherapy appeared to result in a change in consultation behavior, moving away from the conventional paradigm of treatment headed by general practitioners. Physiotherapists in community settings are well-positioned to provide a comprehensive care plan that integrates self-help advice into an exercise-focused treatment program. They can also help transfer the responsibility of managing chronic musculoskeletal issues from general practitioners. In addition, community pharmacists have been associated with a novel responsibility as "supplementary prescribers." This enables them to evaluate and, if needed, prescribe specific medications as part of a mutually agreed clinical management plan for patients whose condition has been evaluated by an independent prescriber, such as a general practitioner. Studies have demonstrated that interventions conducted by pharmacists and nurses have a positive impact on prescribing practices. These interventions help to decrease the occurrence of adverse drug responses, enhance the appropriateness of drug use, lower drug expenses, and improve patient compliance across various medical conditions.

Keywords*: Osteoarthritis, Physiotherapists, supplementary prescribers.*

Introduction

Osteoarthritis (OA) is an umbrella term that encompasses many joint disorders. The primary impacts of OA encompass the breakdown of cartilage, the occurrence of acute and chronic inflammation in the synovial membrane, modifications in the subchondral bone, the development of osteophytes, and alterations in the synovial fluid [1].

It is crucial to deliver osteoarthritis care that is based on high-quality guidelines that effectively promotes and maintains supported self-management. Nevertheless, the management of osteoarthritis lacks consistency, with a notable failure to adequately utilize fundamental non-pharmacological methods such as education, exercise, and weight loss [1].

The existing information regarding the primary care therapy of osteoarthritis substantiates the utilization of both pharmacological and non-pharmacological methods. Nevertheless, the conventional approach of relying solely on general practitioners to provide these therapies is becoming less feasible, and alternative models that utilize the expertise of other members of the primary healthcare team have been suggested. For elderly individuals experiencing knee discomfort, there are at least two agencies that can offer organized and effective care. An improved pharmacy review service conducted by community pharmacists has the potential to optimize the management of knee pain and deliver straightforward self-help messaging. Additionally, implementing a community physiotherapy service that emphasizes self-management in conjunction with an exercise-focused treatment plan could be a feasible method for optimizing the effectiveness of non-pharmaceutical interventions [2,3].

Review:

It is common for people to suffer from osteoarthritis, which is a painful and disabling condition that frequently occurs in conjunction with other long-term conditions (LTCs) such as cardiovascular and pulmonary disorders, hypertension, and diabetes [2]. The guidelines for osteoarthritis that were developed by the National Institute for Health and Care Excellence (NICE) [3] include the provision of information, the control of weight, and the exercise of the individual. These recommendations are founded on evidence that demonstrates that these approaches result in decreased levels of pain and improved levels of function [3]. In addition to improving results for other frequent co-existing illnesses, increasing physical activity and maintaining a healthy weight can also enhance outcomes. Therefore, the development of methods to support the delivery of osteoarthritis recommendations in order to successfully promote and maintain supported self-management ought to have a wide range of good consequences for those who suffer from osteoarthritis [3].

According to the data that is currently available, the majority of individuals who contact with healthcare professionals pertaining to osteoarthritis do so with their primary care physician, whereas around one sixth consult with a physical therapist. On the other hand, osteoarthritis treatment is not constant. Family physicians have a tendency to underuse core non-pharmacological approaches and to use pharmacological strategies extensively [4]. Physical therapists offer exercise and are in a good position to provide advice on weight loss and analgesia; however, there is equivocal evidence that they have the confidence to do so in current practice [5]. It is for this reason that opportunities to promote self-management that is backed by guidelines for persons who have osteoarthritis are now being missed [5].

People who are living with long-term conditions such as osteoarthritis frequently seek support from community pharmacies, which are easily available in the areas in which they live, either before or in addition to obtaining assistance from professional medical treatment. Despite the fact that the number of community pharmacies in England has been decreasing since 2015 [6], there are still over 10,000 local pharmacies available. Community pharmacy roles have been pushed as a result of national workforce initiatives and policy proposals in the United Kingdom to incorporate pharmacists into long-term care pathways. Within the past twenty years, the activities of community pharmacists have expanded beyond the simple provision of medications and the management of issues connected to medicines. These roles now encompass a wider range of "cognitive services," which includes the optimization of

medicines [7]. It is now widely acknowledged that their purpose is to "help persons with long-term care situations in order to improve their quality of life, health, and wellbeing, and to lead as independent a life as possible by providing support for self-care" [7]. The present steps taken by the government to improve contact with pharmacies make it rational and necessary to provide support for community pharmacy services in order to improve the quality of care that is provided to individuals who suffer from osteoarthritis. Similar initiatives are currently being explored in other countries [8], however, the expected role of community pharmacies in delivering osteoarthritis care, necessary support or pathways to provide this care, and patient and public awareness of the breadth of community pharmacy roles are not well understood/established in the United Kingdom [8]. To be more specific, there is a lack of knowledge on the following topics: what an improved community pharmacy role for osteoarthritis treatment should comprise, what kind of support is required to fulfill such a role, and whether or not it would be viable to deliver and acceptable to community pharmacy teams.

When it comes to people who suffer from knee osteoarthritis (OA), there is compelling evidence that routine exercise programs can dramatically reduce pain and improve physical function over time. Because of this, acupuncture, aquatic exercise, electroacupuncture, inferential current, kinesio taping, manual therapy, moxibustion, pulsed electromagnetic fields, tai chi, ultrasound, yoga, and whole-body vibration all have been shown to be effective in treating a variety of conditions [9]. Surgical management is an alternate treatment that does not include the use of pharmaceuticals for patients who are eligible. A few examples of non-pharmacologic therapies for rehabilitation are discussed in the following paragraphs.

The majority of worldwide recommendations suggest that people suffering from osteoarthritis should begin their treatment with physical activity. Those individuals who have knee osteoarthritis and want to improve their physical function while also reducing their pain are encouraged to participate in physical activity as a recovery alternative [10]. On the other hand, it was shown that exercise has a pain-relieving effect that is comparable to that of basic analgesia or non-steroidal anti-inflammatory medicines, but it brings about fewer adverse effects. In spite of the fact that earlier studies suggested that physical activity had only limited advantages in terms of alleviating pain and improving physical functioning, a recent study found that physical activity had a considerable favorable effect on individuals who were experiencing symptoms of hip osteoarthritis [10].

In addition, resistance training's muscle-strengthening capabilities are improved by aerobic training, which, as was mentioned earlier, has favorable consequences [10]. Patients should be informed about the everyday unpredictability of the disease as well as the ways in which over-exercising might impact them. This can manifest as higher discomfort during operations that last for more than one or two hours, edema, tiredness, and muscle fatigue and should be communicated to patients. The patient's education, on the other hand, should not develop fear of action in the patient because this is frequently associated to a poor response to therapy [10].

Heating not only reduces discomfort but also increases the expression of heat shock protein 70 (HSP 70), which has a calming and relaxing impact on patients suffering from osteoarthritis for whom it is administered. A number of functions, including cartilage protection, inflammation reduction, and chondrocyte apoptosis prevention, are performed by HSP 70. So far, the only advantage that has been shown with superficial cold therapy is the alleviation of discomfort [10].

There is also some debate on the use of neuromuscular electrical stimulation (NMES) in female patients who suffer from moderate to severe osteoarthritis of the knee. When it comes to strengthening the quadriceps muscle, it has been demonstrated that NMES has little effect. Despite the fact that there were indications of enhanced quadriceps muscular activation, the Cochrane Review discovered that there was no improvement in isometric resistance [11].

The administration of pharmaceuticals

The alleviation of the symptoms of osteoarthritis (OA) is the major objective of pharmacological treatment for OA. The medications that are prescribed the most

frequently in this category are analgesics and nonsteroidal anti-inflammatory drugs, also known as NSAIDs. There have also been instances of the use of intra-articular and topical treatments [11]. The primary focus of management options for osteoarthritis (OA) at the present time is palliative pain control. In severe cases, it has been demonstrated that joint replacement surgery can alleviate the agonizing and incapacitating symptoms that are associated with the illness. At this time, there are no medications that can either slow down or halt the progression of osteoarthritis (OA). There are currently available treatment techniques for osteoarthritis (OA), and their primary goals are to alleviate pain and suffering, preserve joint stability, and prevent the loss of function [12].

NSAIDs have the potential to be helpful in treating a variety of ailments, including joint discomfort. In order to ease the discomfort associated with arthritis, oral analgesics, such as acetaminophen, ibuprofen, diclofenac, and cyclooxygenase type 2 (COX-2) antagonists, as well as intra-articular corticosteroids, are frequently utilized [12].

Steroid injections into the articular cartilage are another method of treatment for osteoarthritis (OA). There are a number of formulations that are administered the most frequently, including methyl prednisolone acetate, betamethasone acetate/betamethasone sodium phosphate, triamcinolone acetonide, triamcinolone hexacetonide, and betamethasone dipropionate/betamethasone sodium phosphate [13].

Hyaluronic acid is a structural polysaccharide that is found in the extracellular matrix of cartilage. It is critically important in the development of SF because of its role in the process. In order to ensure that SF continues to perform its functions as a lubricant and shock absorber, it is essential that its viscoelastic qualities be preserved [13].

Conclusion:

Approximately 60% of people with diagnosable osteoarthritis may not be actively pursuing medical treatment. Pharmacists, nurses, and physiotherapists are highly reliable sources of advice and possess the ability to evaluate the medications individuals are currently using, as well as comprehend the potential for drug interactions. However, there is only limited evidence of their participation in managing joint pain in community pharmacies. Providing community pharmacists with resources to recognize osteoarthritis (OA) can help to close this divide by facilitating a discussion about OA. Further investigation is required to ascertain whether implementing such an approach would result in any enhancements in consumers' understanding or their capacity to effectively handle early osteoarthritis pain. The efficacy of nonpharmacological therapies, such as patient education, exercise, and weight reduction when necessary, is directly proportional to the level of knowledge and utilization. Increased frequency of application leads to improved outcomes. An integrated strategy can typically achieve pain relief and restore joint mobility and functionality in the majority of patients. When considering the various pathways utilized, employing a strategy that focuses on a single objective is unlikely to effectively solve the problem. Therefore, similar to other chronic illnesses, the treatment of OA has the capacity to enhance.

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