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Osteoarthritis: A Short Review Article

Nishanathini Raman

¹Assistant Professor, Department of Medical Surgical Nursing, Vivekananda Nursing College, Iyyankuttipalayam, Puducherry.

Abstract:

Osteoarthritis (OA) is the most common chronic degenerative joint disorder affecting older adults worldwide and represents a major cause of pain, disability, and reduced quality of life. It is characterized by progressive degeneration of articular cartilage, subchondral bone remodeling, osteophyte formation, and synovial inflammation. Aging, obesity, joint injury, genetic susceptibility, and mechanical stress are important risk factors contributing to disease development. Patients commonly present with joint pain, stiffness, reduced mobility, and functional impairment, particularly involving the knees, hips, hands, and spine. Diagnosis is primarily clinical and supported by radiological findings. Management focuses on symptom relief, improvement of joint function, and slowing disease progression through lifestyle modification, pharmacological therapy, physiotherapy, and surgical interventions when necessary. Early detection and multidisciplinary care are essential to prevent disability and improve patient outcomes.

Keywords: Osteoarthritis, degenerative joint disorder, older adults.

INTRODUCTION:

Osteoarthritis is a chronic, progressive musculoskeletal disorder characterized by structural and functional deterioration of synovial joints. It primarily affects weight-bearing joints such as the knees and hips but can also involve the hands and spine. OA is increasingly recognized as a whole-joint disease involving cartilage, bone, ligaments, and synovial tissue rather than simply cartilage wear and tear (Hunter & Bierma-Zeinstra, 2019). With increasing life expectancy and sedentary lifestyles, the global burden of osteoarthritis continues to rise.

PATHOPHYSIOLOGY

OA develops due to an imbalance between cartilage breakdown and repair. Mechanical stress and inflammatory mediators stimulate chondrocytes to produce enzymes that degrade collagen and proteoglycans within the extracellular matrix. Progressive cartilage erosion leads to narrowing of joint space, subchondral

sclerosis, and osteophyte formation. Synovial inflammation further contributes to pain and structural damage (Loeser et al., 2012). Metabolic and systemic inflammatory factors also influence disease progression.

CLINICAL MANIFESTATION

Common symptoms include activity-related joint pain, short-duration morning stiffness (less than 30 minutes), swelling, crepitus, and reduced joint mobility. The knee is the most frequently affected joint. Advanced cases may result in deformity and marked functional impairment (Kolasinski et al., 2020).

DIAGNOSIS

Diagnosis is based on clinical assessment and radiographic findings such as joint space narrowing, osteophytes, subchondral sclerosis, and cyst formation. Laboratory tests are typically normal and are performed mainly to exclude other inflammatory arthritides.

MANAGEMENT

Management strategies include non-pharmacological and pharmacological approaches. Weight reduction, structured exercise programs, physiotherapy, and patient education form the foundation of treatment. Pharmacological options include acetaminophen, NSAIDs, topical agents, and intra-articular corticosteroid injections. In severe cases, total joint arthroplasty may be required to restore function (Katz et al., 2021).

CONCLUSION

Osteoarthritis is a progressive joint disorder with significant physical and economic impact. Early diagnosis, lifestyle modification, and individualized treatment are crucial for symptom control and prevention of disability. Multidisciplinary management improves long-term patient outcomes.

BIBLIOGRAPHY:

1. Hunter, D. J., & Bierma-Zeinstra, S. (2019). Osteoarthritis. *The Lancet*, 393(10182), 1745–1759.
2. Loeser, R. F., Goldring, S. R., Scanzello, C. R., & Goldring, M. B. (2012). Osteoarthritis: A disease of the joint as an organ. *Arthritis & Rheumatism*, 64(6), 1697–1707.
3. Kolasinski, S. L., Neogi, T., Hochberg, M. C., et al. (2020). 2019 American College of Rheumatology guideline for osteoarthritis management. *Arthritis Care & Research*, 72(2), 149–162.
4. Katz, J. N., Arant, K. R., & Loeser, R. F. (2021). Diagnosis and treatment of hip and knee osteoarthritis. *JAMA*, 325(6), 568–578.
5. Glyn-Jones, S., Palmer, A. J. R., Agricola, R., et al. (2015). Osteoarthritis. *The Lancet*, 386(9991), 376–387.

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