OSTEOARTHRITIS – LEADING CAUSE OF DISABILITY IN THE ELDERLY

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Background

• Osteoarthritis (OA) is a slowly progressive musculoskeletal disorder associated with increased age and is characterized by joint pain and tenderness, limitation of motion, joint deformity and instability.
• It has long been considered a noninflammatory process, but new insights suggest a role of proinflammatory mediators and proteases therefore enabling development of new treatment targets.

Material & Methods

• Multiple risk factors for developing OA have been identified, including age, obesity, joint injury, genetics, gender, as well as anatomical factors.
• The pathogenesis of osteoarthritis involves various cytokines, chemokines and proteases and resembles that of a chronic nonhealing wound.
• There is growing evidence implying activation of the innate immune system as well as epigenetic changes contributing to development of OA.

Results

• Available treatment modalities consist of pain management but no treatment has been proven to alter the structural progression of the disease.
• Agents inhibiting catabolic processes and those stimulating anabolic processes, as well as drugs that modify inflammatory pathways and bone remodelling are being investigated.
• They are referred to as disease-modifying OA drugs (DMOADs) or structure-modifying OA drugs (SMOADs).
• Investigational drugs targeting pain have focused on inhibiting nerve growth factor.
• Clinical difference between osteoarthritis and rheumatoid arthritis, the two most common forms of arthritis, is shown in the images.

Conclusion

• Osteoarthritis is the most common form of arthritis.
• Since it affects mainly the elderly and is associated with substantial disability and reduced quality of life, it represents a great burden for the aging population.
• Novel insights into pathophysiology of the disease promise new treatment modalities, as opposed to current treatment targeting symptomatic relief.