

OSTEOARTHRITIS

Arthritis is second to heart disease in global epidemiology and the leading cause of disability. The summary of health statistics for US adults for the year 2002 issued by NCHS stated that 42.7 million noninstitutionalised adults had arthritic symptoms in the US. Figures suggest that in the age group 65-74 years, 39% and 23% of the population show signs of osteoarthritis (OA) in the knee and hip respectively whereas in the age group 75-79 years this figure increases to approximately 100%. OA is primarily a disease in which the cartilage of the joints undergoes degradation. The predisposing factors are aging, genetics, weight (OA of the knee in particular) and abnormal joint alignment. The secondary predisposing factors are trauma, gout, rheumatoid arthritis and some other underlying joint and bone disorders. Symptoms of arthritis include pain (typically worsens with activity and changes in weather), inflammation, stiffness, restricted joint movement, deformity and disability. The most common sites affected are those of the hand, hips (in the age group 55-64 yrs) and knees (in the age group 65-74 yrs). The goals of treatment are reduction of pain, improvement in joint and general function and overall improvement in health-related quality of life. Non-pharmacological interventions are the first line of treatment and include patient education, weight loss (if overweight), aerobic, range-of-motion and muscle-strengthening exercises, assistive devices for ambulation and activities of daily living, appropriate footwear, lateral-wedged insoles, bracing and joint protection. If non-pharmacological therapy fails, pharmacologic therapy includes anti-inflammatory or analgesic drugs orally or superficially to the joints. Anti-inflammatory drugs should not be used for a long duration since they can lead to significant morbidity and mortality due to harmful effects on the gastrointestinal system, heart and the kidneys. Drugs like glucosamine supposedly help in reducing the rate of degradation of the cartilage. In patients who continue to have problems or in whom pharmacologic therapy cannot be tapered, injections of steroids or hyaluronan in the joint could be given. Surgical treatment is reserved for those with severe symptoms who have failed to respond to medical therapy and have progressive limitation in activities of daily living. Surgery includes arthroscopy or high tibial osteotomy in less severe cases and total joint replacement in severe cases. Research in the field of autologous chondrocyte transplantation and cartilage repair using mesenchymal stem cells is in an advanced stage.