

Causes and Consequences of Bone Deformities in Older Adults

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ABOUT THE STUDY

As individuals age, their bodies undergo various changes, including the skeletal system. Bone deformities are a common occurrence in older adults, often resulting from age-related conditions, underlying diseases, and lifestyle factors.

These deformities can significantly impact the quality of life, leading to pain, immobility, and an increased risk of fractures.

Causes of bone deformities in older adults

Osteoporosis: Osteoporosis, characterized by decreased bone mass and density, is a leading cause of bone deformities in older adults. With age, bone remodelling becomes imbalanced, resulting in weakened bones that are more prone to fractures. Compression fractures of the spine (vertebral fractures) are a common consequence of osteoporosis, leading to a stooped posture and reduced height.

Osteoarthritis: Osteoarthritis, a degenerative joint disease, affects the joints, including those in the spine, hips, and knees. The breakdown of cartilage and subsequent bone remodelling can cause bone spurs, joint deformities, and restricted mobility.

Rheumatoid arthritis: Rheumatoid arthritis is an autoimmune disease that primarily affects the joints. Inflammation leads to joint erosion, deformities, and eventually, bone destruction. The wrists, hands, and feet are commonly affected, causing deformities like swan neck deformity and boutonniere deformity.

Paget's disease: Paget's disease is a chronic bone disorder characterized by abnormal bone remodelling. The affected bones become enlarged, weak, and prone to deformities. Commonly affected areas include the spine, pelvis, and long bones.

Consequences of bone deformities in older adults

Pain and discomfort: Bone deformities can cause chronic pain, leading to reduced mobility and decreased quality of life. The pain can limit daily activities and impact mental well-being.

Fracture risk: Deformed bones are weaker and more susceptible to fractures. Hip fractures, in particular, can be severe and life-threatening for older adults, leading to increased morbidity and mortality rates.

Impaired mobility: Deformities of weight-bearing joints, such as the hips and knees, can significantly impair mobility and function. Older adults may experience difficulties walking, climbing stairs, or performing basic tasks independently.

Postural changes: Deformities of the spine, such as kyphosis (hunchback), can lead to postural changes and a stooped posture. This not only affects physical appearance but also increases the risk of falls and fractures.

Management of bone deformities in older adults

Physical therapy and rehabilitation programs are also integral in managing bone deformities in older adults. These programs focus on exercises that improve strength, flexibility, and balance, thereby reducing the risk of falls and fractures. Assistive devices like canes, walkers, or orthotic braces may be recommended to provide support and stability during daily activities.

Medications: Pharmacological interventions play a crucial role in managing bone deformities. Medications for osteoporosis, such as bisphosphonates and selective estrogen receptor modulators, help slow bone loss and reduce fracture risk. Anti-inflammatory medications and Disease-Modifying Antirheumatic Drugs (DMARDs) are used to manage rheumatoid arthritis and related joint deformities.

Physical therapy: Physical therapy and exercise programs are essential for maintaining mobility, improving strength, and managing pain. Weight-bearing exercises, range-of-motion exercises, and resistance training can help improve bone health and preserve joint function.

Assistive devices: Assistive devices like canes, walkers, and braces provide support and stability to older adults with bone deformities. They aid in reducing the risk of falls, improving mobility, and maintaining independence.

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