Musculoskeletal Disease in the Aged
Diagnosis and Management

Richard F. Afable¹ and Walter H. Ettinger Jr¹,2
1. Department of Internal Medicine, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, North Carolina, USA
2. Public Health Sciences, Bowman Gray School of Medicine of Wake Forest University, Winston-Salem, North Carolina, USA

Summary

Musculoskeletal diseases are the most prevalent conditions affecting the elderly today and cause significant suffering and disability in this population. The diagnosis of musculoskeletal disorders in older persons requires knowledge of the diseases which affect this age group, familiarity with the signs and symptoms, and a working knowledge of laboratory and radiographic abnormalities. Treatment of these disorders is based upon the principles of pain relief and maintenance of function. A multifaceted approach includes physical therapy, patient education, psychological support and the use of medications. Simple analgesics like paracetamol (acetaminophen) are gaining increased importance in the treatment of symptomatic disease. Nonsteroidal anti-inflammatory drugs (NSAIDs) are the most utilised pharmacological treatment and are effective in relieving pain and improving function in most patients. However, elderly persons are at increased risk for NSAID-induced toxicity, and drug choices should be made with this in mind. New data are becoming available as to the relative toxicity of the different NSAIDs, and this
Musculoskeletal diseases are the most prevalent disorders and the leading cause of disability in the elderly (Calkins 1991). The impact of these disorders on the older adult is enormous, affecting more than just physical health and function; the psychological and social impact is significant as well. It is imperative that the clinician caring for older persons be skilled in the diagnosis and management of musculoskeletal disorders. This article will address the diagnosis and treatment of musculoskeletal diseases in the elderly, and will particularly explore pharmacological options for the management of these conditions.

1. Epidemiology

The ability to diagnose musculoskeletal disease in the elderly is dependent on a thorough knowledge of the disorders which affect this population (table I). The incidence of several musculoskeletal diseases increases with age. Osteoarthritis (OA) is the most common musculoskeletal disorder in the elderly. Generalised radiographic OA, defined as involvement of 3 or more extraspinal joints, affects 15 to 25% of men and women over the age of 45 (Lawrence et al. 1966). Joint-specific radiographic OA is increasingly prevalent with age, involving the hands in up to 40% (Lawrence et al. 1966), the knee in 33% (Felson et al. 1987), and the cervical/lumbar spine in approximately 20 to 30% of persons over the age of 60 (Lawrence et al. 1966). The prevalence of OA of the hand is as high as 80% in persons aged 75 to 79 years (Roberts & Burch 1966).

It should be noted, however, that only a minority of persons with radiographic OA report symptoms. Osteoporosis is one of the most important disorders associated with aging, causing fractures and associated pain, deformity, and loss of independence in millions of postmenopausal women and aged men (Riggs & Melton 1986).

Polymyalgia rheumatica is a disease which is seen almost exclusively in persons over the age of 55 years (Chang et al. 1982). Gout is more prevalent with age, partly because of increased serum urate levels and the use of drugs which cause hyperuricaemia such as diuretics (Doherty & Dieppe 1985). Pseudogout and chondrocalcinosis are caused by deposition of calcium pyrophosphate dihydrate crystals in joints, often as a secondary manifestation of endocrine or metabolic diseases which are common in the elderly, such as hyperparathyroidism, hypothyroidism, and chronic renal failure (Alexander et al. 1982). Paget's disease of bone is a condition of disorderly bone metabolism which may affect up to 3% of the population over the age of 40 (Singer 1987). Some musculoskeletal disorders decline with advancing age, such as systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA). Nonetheless, cases do occur in the elderly, and 10% of SLE and RA patients will be...