

## Chronic Geriatric Pain: An Overview

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Rec date: Aug 18, 2014; Acc date: Aug 22, 2014; Pub date: Aug 24, 2014

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### An Overview

Chronic geriatric pain may be defined as “an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage, for persons who are either aged (65 to 79 years old) or very aged (80 and over) and who have had pain for greater than 3 months” [1]. The incidence of pain increases with age [2]. World Health Organization conducted multicountry Study of Global Ageing and Adult Health(SAGE) found that out of six countries-China, Ghana, India, Mexico, Russia, and South Africa-all but Mexico reported an increase in the prevalence of pain with increased age and more pain in women than in men. According to recent analysis of data from the National Health and Aging Trends Study by National Institute on Aging (NIA), USA- half (53 percent) of the older adults surveyed reported having bothersome pain in the last month; three-quarters of them reported having pain in more than one body location. Bothersome pain, particularly in multiple locations, was also associated with decreased physical capacity [3]. The elderly are more likely to have arthritis, bone and joint disorders, cancer, and other chronic disorders associated with pain [4]. This may lead to impaired activities of daily living (ADLs) and ambulation, depression, and strain on the health care economy [5]. Physicians often undertreat the geriatric pain. Underreporting of pain and cognitive disturbances usually prevent proper assessment of pain in elderly. Best indicator for pain assessment is patients own report about intensity of pain and its effect on his daily function [6]. Etiology of pain can be assessed by proper history, physical examination followed by appropriate diagnostic studies. The physical exam should not only focus on organ systems and body regions pertinent to the pain complaint but should also include a focused neurologic, autonomic, and psychological assessment. Aging is characterized by changes in pharmacokinetics of drugs due to physiological changes related to aging. Increased volume of distribution of lipid soluble drug due to relative increase in total fat content leads to their prolonged elimination half-lives. While renal function consistently decline with age, hepatic function for the most part remain unchanged with aging. The central and peripheral nervous system changes are variable, depending on heredity and daily activity. Treating pain in older people also is complicated by the fact that 75 percent of people 65 and older have two or more chronic conditions-such as heart disease, diabetes, chronic lung disease, or arthritis [7]. Medications for these conditions can interact with pain medications, and pain often goes untreated or undertreated as a result.

Painful disorders in elderly can be classified into 1) Nociceptive pain(Osteoarthritis, Shingles (reactivation of herpes zoster), Spinal stenosis, Polymyalgia rheumatic, Temporal arteritis, Peripheral vascular disease and 2) Neuropathic pain (trigeminal neuralgia, diabetic neuropathy, and post herpetic neuralgia).Various drugs either alone or in combination have been used to relieve persistent pain.

Acetaminophen should be considered as initial and ongoing pharmacotherapy in the treatment of persistent pain, particularly musculoskeletal pain, owing to its demonstrated effectiveness and good safety profile. Nonselective NSAIDs and COX2 inhibitor may be rarely considered due to their proven side effects. Opioid therapy should be considered for all patients with moderate to severe pain, pain related functional impairment, or diminished quality of life due to pain. Adjuvant drugs class modify the perception of pain includes antidepressant, anticonvulsants, and other agents that alter neuronal processes involved in pain signal processing [8]. Combination of two or more drugs with possible synergistic mechanism of action should be used for greater relief of pain with lesser drug toxicity. Relief from persistent pain can be further enhanced by combining pharmacological and non-pharmacological strategies. Non pharmacological approaches include physical therapy, cognitive behavioral therapy and patient and caregiver education interventions [9].

As long term use of pharmacotherapy is limited by drug tolerance and its potential abuse, development and testing of gene therapy for treatment of chronic pain is the future area of research in various geriatric pain disorders. Initial results from preclinical studies followed by phase I human clinical trials have been encouraging so far [10].

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