American Pain Society
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ADVOCACY
PUBLISHED BY ELSEVIER

The Journal of Pain, Vol 12, No 3 (March), Suppl. 1, 2011: pp S3-S13
Available online at www.sciencedirect.com

Pain Assessment Strategies in Older Patients

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Abstract: The prevalence of pain and pain undertreatment in older persons, along with the many potential detrimental consequences of undertreated pain, pose a substantial burden to the individual, their family, and society. An accurate pain assessment is the foundation for treating pain; yet, thorough pain assessments and regular reassessments are too often neglected. Older adults typically present with multiple pain etiologies, making it all the more imperative that a comprehensive assessment is conducted. Comprehensive assessments should include a detailed investigation of a patient's pain and medical history, a physical examination, and diagnostic testing, if needed. Both the impact of pain and its severity should be established by questioning about the presence of pain and using pain assessment instruments. Tools for pain assessment should be tested in older adult populations to establish reliability, validity, and sensitivity to changes from treatment. Self-report is the gold standard for assessing pain; however, in many clinical circumstances with older adults, the patient's verbal report is unobtainable. Following an unsuccessful attempt at self-report from a nonverbal older adult, the potential causes of pain should be explored. Direct observation can then be used to identify behaviors suggestive of pain, and the patient's response to an analgesic trial can be observed. A pain behavior tool can also provide useful information suggesting the presence of pain.

***Perspective:** A comprehensive assessment of pain in older persons is essential, although more complex and challenging due to comorbidities, sensory and cognitive impairments, and misbeliefs about pain in aging. Best practice recommendations guide approaches and tool selection to facilitate effective pain assessment.*

***Key words:** Cognitive impairment, pain assessment, pain assessment scales, pain behavior tools, undertreatment.*

Persistent Pain in Older Adults: The Importance of Pain Assessment

Persistent pain is common among the aging population,[2] much more so than in younger cohorts. Recent studies on pain found that 17% of adults under 30 in the United States experience pain often compared with 57% of older adults.[5] The prevalence of pain in older persons (typically defined as 65 years or older by demographers, insurers, and employers)[3] consistently demonstrates a substantial burden of pain, with reports of 35% to 48% of older adults in the community experiencing daily pain[47,54] and 45% to 85% of older persons residing in nursing homes experiencing pain.[40,79,89] Furthermore, undertreated pain has many potential detrimental consequences that affect the individual in question but also can burden their family, friends, and even society. These consequences include depression, anxiety, falls, malnutrition, reduced cognition, impaired sleep, functional disturbances, declines in socialization and recreational activities, increased health care costs, and reduced quality of life (QOL).[37,70] Higher postoperative pain scores are related to longer hospital stays, increased time to ambulation, and chronic functional impairment, indicating that pain has a more potent impact than simply patient discomfort and needs to be addressed early.[61]

An accurate pain assessment is the foundation for treating pain in a systematic way.[3] Yet, a thorough pain assessment and regular reassessments are often

An educational grant was provided by Endo Pharmaceuticals Inc. for the symposium on which this paper was based and for subsequent manuscript development.

Publication of this article was supported by Endo Pharmaceuticals Inc.

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1526-5900/$36.00

doi:10.1016/j.jpain.2010.11.011

neglected despite a wide acknowledgment that these are essential components of good pain management. For example, inconsistency in pain assessments was noted in a study of 1454 patients over the age of 65 years who were treated in the emergency department for hip fractures. Thirty-four percent of those studied received no objective assessment of pain, and only 59% were assessed with self-report measures of pain, despite the prevalence of extreme pain (the mean pain intensity score reported was 7/10).[34] Perhaps consequent to the lack of recognition of pain, 40% of these patients were not prescribed an analgesic.

Self-report is the gold standard for assessing pain[2]; however, in many clinical circumstances with older adults, such as with those who have cognitive impairment, the patient's verbal report is unobtainable, necessitating use of observer estimates. Available data suggest that clinicians tend to underestimate pain severity, while relatives of a patient perceive greater pain severity than that reported by older adults.[44,82] The adverse consequences of inaccurate estimates of pain include undertreatment or lack of treatment in the first instance, and overtreatment in the second. Thus, attempting to get self-report from the older adult when possible is a priority.

Clinical barriers to appropriate pain assessment that can affect clinicians, caregivers, and any member of a multidisciplinary care team, such as physiotherapists, social workers or pastors, include insufficient training, suboptimal communication methods, and lack of use of appropriate assessment tools.[55] Stoic attitudes of individuals in pain, myths about pain being an essential element of aging, and fears about using pharmacotherapies can also hinder the diagnosis and treatment of pain in older adults.[27] Misinterpretation and poor detection of pain are particularly problematic in patients with cognitive impairment, as they tend to have memory, language, and speech deficits, and an altered ability to recognize pain.[11] Indeed, patients with severe or mixed dementia have a high risk for undertreatment of severe pain.[39] This may stem from a diminished ability to describe the characteristics of their pain to health professionals, particularly in the context of how it differs from levels in the preceding hours or days.[46]

Ultimately, failure to recognize pain leads to undertreatment. However, even when pain is recognized, pain treatment in older adults often falls short of prescribing recommendations. A study of 21,380 nursing home residents identified persistent pain in 49% of those studied.[86] Yet, 24% of those with persistent pain received no analgesics, and less than half of the medications were prescribed as standing orders. Acetaminophen was the most frequently prescribed analgesic and often at doses <1300 mg/day.[86] A study of the knowledge and beliefs of nurses caring for older adults with dementia in a nursing home setting found that a large number of the professionals thought patients should only receive analgesics "when necessary" rather than on a fixed schedule.[88] However, deficits or misbeliefs about the care of older adults can affect all clinicians, not just nurses.

Advanced age is the most important risk factor for developing cognitive impairment,[73] and the severity of cognitive impairment has been directly correlated to an increased risk of undertreatment of pain. Furthermore, better cognition has been associated with a greater likelihood of receiving an analgesic other than acetaminophen. In a study of 551 nursing home residents, only 56% of individuals with severe cognitive impairment received pain medications, compared with 80% of the cognitively intact cohort ($P < .001$) despite a similar rate of pain-related conditions between the groups.[69] Notably, cognitively impaired persons were more likely to be given "as needed" pain medications while their peers had regularly scheduled analgesics. "As needed" drug regimens are particularly inappropriate for individuals with moderate-to-severe cognitive impairment who are unable to communicate the presence of pain, much less a need for analgesics.

Components of a Comprehensive Clinical Assessment for Pain

Comprehensive assessment across all populations should include a detailed investigation of a patient's pain and medical history, a physical examination, and diagnostic testing if needed. Sensory impairments (hearing or vision), dysphasia, aphasia, and cognitive impairments should be noted upfront (potentially through screening with the Mini-Mental State Examination [MMSE][20] or the Mini-Cog[10]), as they can impose limitations on the direct information gathered during assessment and diagnosis, or require methods for modifying the techniques used for assessment of pain and its impact. A pain history should include characterization of the current complaint, including associated features or secondary signs and symptoms.[27,29] The present pain complaint should be described in terms of intensity, quality, location(s) (including radiation), pattern (including onset, duration, and frequency), and aggravating and relieving factors.[27,29] Nonverbal cues (eg, guarding, grimacing, and restricted movement) should be noted, particularly if the older person is unable to provide a description of the pain, and furthermore, in circumstances where self-report is unobtainable, gathering information and history from other sources, such as the primary caregiver, can be helpful.[7,27]

One of the main purposes of the history and physical exam is to identify a cause of pain.[27] Older adults typically present with multiple pain etiologies. Indeed, a *comprehensive* assessment is even more critical in this population, in order to gather complete information on all of the locations of pain and the types of conditions that may be causing pain. During history taking, focus should be on known painful conditions that are more prevalent in the aged, with specific attention to the musculoskeletal and nervous systems.[27] A proactive approach to pain management includes specific consideration of the most common diagnoses associated with pain in older adults (Table 1). Knowledge of pathological conditions that are common in older adults and known to be painful, such as inflammation, infection (pneumonia, urinary tract infections, skin infections, dental problems),