Understanding and treating pain in the elderly

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Pain is not an inherent part of the ageing process; its prevalence is related to the burden of pathology in old age, such as musculoskeletal diseases, cancer and medical procedures. The impact of pain on function and mood may be as important as the pain itself. Pain is often under-recognised and undertreated, especially in the most vulnerable people, such as those with dementia or living in nursing homes.

Key points

- **Painful conditions are among the most common reasons for older people to present for medical attention.**
- **Pain is not a normal part of ageing; its high prevalence in older people is secondary to the burden of pathology.**
- **A person's response to analgesics is variable.**
- **Ineffective or poorly tolerated analgesics should be withdrawn before another medication is trialled.**
- **A multidisciplinary approach is recommended when usual approaches have failed.**

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Painful conditions are among the most common reasons for older people to seek medical attention. A nationwide survey in the USA reported that 52.9% of older people experienced bothersome pain in the preceding month.[1] Pain is even more prevalent in nursing home residents.[2] Pain is not an inherent part of the ageing process; its prevalence is related to the burden of disease in old age. Older adults are more likely to experience pain as a result of injury, illness, medical procedures and various neuropathies such as diabetic peripheral neuropathy and postherpetic neuralgia. Musculoskeletal conditions are the most common cause of pain in older adults. The most common sites of pain are the back, followed by the knees, hips or legs. Most older people with pain report it in multiple sites.[1,3]

Older individuals may consider pain a normal part of the ageing process and not consult their GPs. Some will deny the presence of pain yet report unpleasant discomforts such as aching joints or tingling in the feet. Some may avoid physical activity to reduce pain. Failure of older people to report pain leads to it being under-recognised in many healthcare settings. At greatest risk are the most vulnerable individuals, such as those with dementia or living in residential care.

Persistent pain is associated with adverse outcomes including impaired mobility and physical function, cognitive impairment, sleep disturbance, depression, decline in social activity, decreased quality of life and increased health service utilisation.[3-5] Clinicians managing pain in older people face additional challenges. Age-related physiological changes, comorbidities, polypharmacy, psychosocial

factors, attitudes and beliefs, frailty, disability and dementia need to be taken into consideration. Most people over the age of 65 years have multiple health problems, with one-quarter of those older than 85 years of age having five or more chronic conditions.[6]

Assessment

The most effective approach to the management of older people with pain is to identify and definitively treat the underlying cause of the pain. However, this is often not feasible. Management should then be guided by the results of a comprehensive assessment of the patient including a review of comorbidities, medications, functional impact and mood. This will assist with the selection of therapy and treatment goals. The patient's priorities should be taken into consideration. Comorbid conditions may be more responsive to treatment than pain and have a bigger impact on quality of life.

Simple pain scales, such as rating pain from zero to 10, with zero being no pain and 10 being the most severe pain imaginable, may be helpful in determining the severity of pain but do not describe the complexity of the pain experience. The Brief Pain Inventory not only explores pain severity, but also the impact of pain across several domains including general activity, walking, sleep, mood and relations with others.[7] It can be completed by the patient before the consultation. For patients with limited verbal ability due to dementia, behavioural and physiological observational instruments such as the Abbey Pain Scale are available.[8]

The clinician and patient should identify realistic treatment goals beyond pain relief such as the ability to walk to the shops or play bowls or minimisation of adverse drug effects.

Examination

Examination of the patient with pain usually focuses on the musculoskeletal and neurological systems, evaluating whether the pain is of nociceptive or neuropathic origin. Neuropathic pain arises from a lesion or disease of the somatosensory system. A diagnosis of neuropathic pain should not be based solely on the description of the quality of pain, such as burning or shooting; it requires a demonstrable lesion or a disease that satisfies established neurological diagnostic criteria. Abnormal sensory findings should be neuroanatomically logical and compatible with a definite lesion site.

Observing the patient during a brief walk is often helpful in distinguishing the impact of pain, weakness and comorbid conditions on function. Impaired balance may be a clue to avoid medications with the potential to affect balance. The examination should also include evaluation of comorbid conditions. The presence of dementia or depression will influence the selection of treatment.

Investigations

The correlation between pathological findings and symptoms is often poor in patients with pain. Diagnostic imaging tends to be overused. Incidental findings may lead to further investigations, specialist referral, increased cost and anxiety. Diagnostic imaging should be considered only if it is likely to influence management or if there are 'red flags' such as a history of trauma, cancer or constitutional symptoms including fevers or unexplained weight loss.

Management

When managing patients with pain, the aim is to select treatments that achieve the optimal balance of efficacy and tolerability. To achieve this, treatment guidelines recommend a multidisciplinary approach, combining pharmacological and nonpharmacological therapies.[3,5] Comorbid conditions such as depression may be more responsive to intervention than the pain, with treatment contributing to improved physical function, mood and quality of life.

Pharmacological therapies

Analgesic medications are the most commonly used treatment for pain in older people. The risk of adverse drug effects is increased due to age-related physiological changes, multimorbidity and polypharmacy. The analgesic medications used should be regularly reviewed, and discontinued if ineffective or associated with intolerable side effects. Combining nonpharmacological and pharmacological approaches may allow for lower doses of medications to be used, with a reduced risk of adverse drug effects.[5]

The timing of medication use may be as important as the choice of medication itself. Patients with chronic pain are best managed with regular long-acting medications (e.g. modified-release paracetamol, controlled-release oxycodone or buprenorphine patches). Short-acting medications (e.g. immediate-release oxycodone) may be required to control breakthrough pain. This is in contrast to incident pain, which occurs predictably – for example, with activity or wound dressings. Incident pain should be managed with short-acting analgesics taken before the event.

Paracetamol is recommended as the initial treatment for patients with persistent pain, particularly musculoskeletal pain.[3,5] This recommendation is based on the relative safety of paracetamol in standard doses, rather than its efficacy. Patients should be advised not to exceed a dose of 4 g of paracetamol per day from all sources. This dose should be reduced in people who are of small size, frail or malnourished or who have significant liver disease. NSAIDs and COX-2 inhibitors may be more efficacious than paracetamol, especially for patients with inflammatory pain; however, these drugs are associated with an increased risk of adverse gastrointestinal, renal and cardiovascular events.[9] NSAIDs and COX-2 inhibitors should be used with caution in older people and then only for the shortest possible time. Topical NSAIDs should be considered as an alternative for patients with localised pain.

Opioid analgesics have an established role in the treatment of patients with acute and cancer-related pain, but their role in patients with chronic noncancer pain remains controversial. Although often used for the management of chronic pain in older people, evidence of long-term efficacy has not been established. Trials of opioid therapy for patients with chronic pain have generally not extended beyond six weeks. The efficacy of these drugs for patients with chronic pain is modest, with an average reduction in pain score of about 32%.[10]

Opioid analgesia should be commenced at a low dose, and slowly escalated according to response. These drugs should be discontinued if an adequate response is not achieved or if poorly tolerated. Doses should generally not exceed the equivalent dose of oral morphine of 100 mg/day without specialist advice.[11] Opioid users are at increased risk of hip and upper limb fractures, myocardial infarction and sexual dysfunction compared with nonopioid users.[12]

Neuropathic pains such as those caused by diabetic peripheral neuropathy and postherpetic neuralgia are poorly responsive to conventional analgesics but may respond to adjuvant analgesics that alter neuronal pain signal processing. Medications in this class include antidepressants and anticonvulsants. The response to these medications is modest. Five or six patients need to be treated for one to achieve more than 50% pain reduction when compared with placebo.[13] Guidelines for the treatment of patients with neuropathic pain recommend use of tricyclic antidepressants (e.g. amitriptyline, nortriptyline; both used off label), serotonin noradrenaline reuptake inhibitors (e.g. duloxetine [indicated for the treatment of diabetic peripheral neuropathic pain], venlafaxine [off-label use]), and the anticonvulsants gabapentin and pregabalin as first-line treatment options.[13] In older people, selection of first-line therapy is often based on tolerability rather than efficacy. Tricyclic antidepressants are poorly tolerated by older people and are best avoided.

The use of a combination of analgesics such as paracetamol with an opioid or an opioid with gabapentin or pregabalin may be more efficacious than a single agent, and enables a lower dose of each agent to be used. Caution is required because adverse effects of multiple medications may be synergistic.[14]

The patient's response to pharmacological therapies should be reviewed regularly, not only in terms of pain score, but also function and quality of life. Adverse effects, such as constipation, impaired balance, falls, sedation and worsening of cognition, should be closely monitored.

Patients' responses to pharmacological therapies are not uniform. A minority of patients achieve very large reductions in pain severity; however, most are poor or nonresponders. If benefit of the medication is uncertain, say less than 25% reduction in pain, then a trial off the medication should be considered before another drug is trialled. A moderate response, for instance more than 50% reduction in pain, is likely to be a therapeutic response. The clinician is then faced with the dilemma of whether to increase the dose aiming for greater pain reduction at the risk of intolerable side effects.[15] Dose escalation is more likely to be limited by side effects than achieving better control of pain.

Nonpharmacological therapies

Nonpharmacological therapies is a collective term for a wide range of physical and psychological approaches. Unlike trials of pharmacological drugs, where the active agent and dose are closely controlled, the content, duration and intensity of nonpharmacological therapies vary widely often determined at the time by the therapist. Nonpharmacological approaches are often more efficacious when combined with pharmacological therapies.[5]

Physical therapies

Physical therapies are evidence based and generally are safer than pharmacological alternatives.[3,16] They tend to be underutilised and should be part of a multidisciplinary pain management program. The focus may be on pain alleviation or general health status, including improvement in mobility and prevention of falls. The nature of the physical program should be tailored to the needs and preferences of the patient. Balance training, flexibility, endurance and strengthening exercises are components of a physical program. Options include home-based exercises, physiotherapy, yoga and tai chi.

Active therapies that patients can sustain over time are preferable to passive and resource-intensive therapies such as acupuncture and massage. Regular walks, aiming for at least 20 minutes on most days of the week, can enhance a patient's health and pain control. Adults who are unable to achieve moderate-intensity physical activity obtain the greatest health and functional benefits with incremental increases in activity at the lower end of the spectrum.[17]

Psychological therapies

Cognitive behavioural therapies serve to modify beliefs and attitudes about pain and enhance the ability to function despite persistent pain. Education about the nature of pain and expectations of treatment and prognosis form an important part of a pain management program. Patients often feel reassured when told that persistence of pain does not mean ongoing tissue damage or serious pathology such as cancer. Psychological therapies include a variety of techniques including relaxation, biofeedback, mindfulness, coping strategies, challenging maladaptive beliefs and goal setting. They are evidence based, but often underutilised.[3,18]

Conclusion

No single therapy has been shown to alleviate persistent pain in most cases. If standard approaches have failed then a multidisciplinary approach is recommended, combining pharmacological, physical and psychological therapies. This is often best delivered by referral to a multidisciplinary pain clinic. As access to multidisciplinary pain clinics with expertise in pain in older people is limited, consideration may be given to conjoint management with a geriatric service. PMT

Further reading

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A list of references is included in the website version (www.medicinetoday.com.au) of this article.

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