

Special consideration for pain management in the older person

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ABSTRACT

Pain is common among older people. However, it remains underrecognised and under-treated. A comprehensive assessment of pain involves identifying its cause, establishing its severity, determining its impact on the person experiencing it and reviewing the person's response to treatment. Addressing their pain requires a different approach compared to a younger person because there is usually concomitant frailty, multimorbidity, polypharmacy, sensory deficits and cognitive impairment. This review will summarise a comprehensive approach to pain management in the older person.

Introduction

Pain is common among older people. Half of community-dwelling older people report pain symptoms, and this prevalence increases to 80% among those living in care homes.^{1,2} Pain is associated with reduced mobility, depression, cognitive impairment, social isolation and sleep disturbance.^{1,3} Musculoskeletal conditions, rheumatological problems and neuropathic issues are common causes of pain.¹ Managing pain in older people is different to a younger person due to their concomitant multimorbidity, polypharmacy, sensory deficits and cognitive impairment.

Challenges in pain assessment

Assessment of pain in older people can be complex. Self-reporting of pain is not always possible because of cognitive impairment or communication difficulties. Reporting pain decreases with cognitive impairment.² Older people with sensory impairment, such as hearing difficulties, and communication difficulties, such as dysphasia after a stroke or delirium, will find it difficult to verbalise their pain and its severity.²

Among those who live alone without regular social contact, pain can persist for some time before it comes to light, either because its intensity has exceeded the person's ability to cope or when another health problem emerges.² Pain has also been incorrectly perceived as part of the ageing process.³ Additionally, some fear reporting pain may lead to a serious health problem being diagnosed, the need for hospitalisation, or developing adverse

effects from treatment for their pain.³ In an acute setting, such as a busy emergency department, an acute problem causing pain may present as delirium which makes the diagnostic and assessment process more challenging. It has also been described that older people with dementia experience more intense pain compared to those without.⁴ All this makes older people a very high-risk group where pain is commonly under-recognised and under-treated.

A clinical approach to pain assessment

A comprehensive assessment of the older person in pain involves identifying its cause, establishing its severity, determining its impact on the person and reviewing the person's response to treatment.⁴ Getting a detailed history from the older person is not always possible. Hence, information from carers, family members or individuals that know the older person well is required.

Key points

Despite pain being common among older people, it remains under-recognised and under-treated.

Assessment of pain can be challenging because many older people have cognitive impairment, sensory difficulties and communication issues.

A comprehensive assessment of pain involves identifying its cause, establishing its severity, determining its impact on the person and reviewing the person's response to treatment.

Appropriate prescribing of analgesia must take into consideration the severity of the pain, a suitable analgesic choice, and how age-related physiological changes can affect treatment.

A multidisciplinary approach is required to address pain and its impact on the older person.

KEYWORDS: pain, pain management, aged, analgesia, opioids

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They would also be best placed to provide collateral information regarding their usual daily living. Engaging with them will also give clinicians an idea of the older person's social network and support structure.

The assessment will involve exploring the pain complaint, understanding the person's medical history and performing a targeted clinical examination. Occasionally, the older person may deny pain and instead use terms such as 'soreness', 'ache' or 'discomfort'.² Furthermore, understanding the person's cognition, mood, sleep, nutritional status, mobility and ability to perform activities of daily living would indicate how pain has affected them.

Pain is usually dynamic and can change in intensity. For instance, pain due to a musculoskeletal cause is made worse during movement. Hence, asking the person lying still in bed, 'How is your pain now?' and 'How is your pain when you try to turn in bed?' can elicit very different responses. Crucially, assessment of pain has to be an iterative process that involves regular review of the older person's response to treatment.

Pain assessment tools

There are lots of pain assessment tools. Broadly, they can be divided into either self-reported or observational pain assessment tools. The choice of which tool to use would depend on the assessor's familiarity, its ease of use, and clinical setting. Common self-reported ones include the numeric rating scale, visual analogue scale, faces pain scale, and the Brief Pain Inventory.¹ The presence of cognitive impairment should not be a barrier to ask the person about their pain. However, when it is not possible, observational tools which rely on behavioural manifestation of pain are recommended, such as the Abbey Pain Scale, Pain Assessment in Advanced Dementia Scale (PAINAD) and Doloplus-2 scale.^{2,5} Regardless of which tool is selected, what is most important is to use an objective scale as part of the assessment.

There are also disease or condition-specific tools that incorporate pain assessment into it. Examples include scales for osteoarthritis (eg the WOMAC Osteoarthritis Index⁶), low back pain (eg the Oswestry Disability Index⁷) and upper arm disability (eg the Disabilities of the Arm, Shoulder and Hand questionnaire⁸).

Safe prescribing of analgesia

Effective pharmacological treatment of pain involves consideration of the physiologic changes associated ageing, their comorbidities and polypharmacy to minimise risk of adverse events.

Ageing is associated with changes in body composition, such as a reduction in total body water and total body mass, and an increase in body fat. This increases the volume of distribution of lipophilic drugs (eg fentanyl) which reduces the rate of elimination. In contrast, the volume of distribution for hydrophilic drugs (eg morphine) decreases which raises their plasma concentration contributing to their risk of an adverse event.^{9,10} Weight is an important consideration for dose reduction of paracetamol due to hepatotoxicity concerns. A maximum dose of 60 mg/kg/day for older people weighing <50 kg is recommended, and this equates to a maximum of 3 g/day instead of the standard maximum dose of 4 g/day.¹¹ Low serum albumin levels seen in malnutrition or acute illness increases the free fraction of highly protein-bound

medication (eg non-steroidal anti-inflammatory drugs [NSAIDs]).⁹ Gastric emptying time increases with age. This results in prolonged gastric contact time of medication such as NSAIDs. In addition, reduction of gastric mucosal cytoprotective factors such as mucosal prostaglandin is commoner in older people. Therefore, older people are more susceptible to gastric mucosal injury from NSAIDs.¹²

Reduction in hepatic mass, hepatic blood flow, and levels of monooxygenases and cytochromes impair drug metabolism by the liver (eg morphine).⁹ Longer colonic transit time predisposes older people to constipation which is exacerbated by opioids.¹³ Glomerular filtration rate and renal blood flow decreases with age.¹⁴ Plasma creatinine measurement in the older person may not reflect actual renal function due to a concurrent decline in muscle mass. Reduction in glomerular filtration rate increases the half-life of drugs that are mainly eliminated via the kidneys. Accumulation of drug or active drug metabolites increases the risk of toxicity and the severity of adverse events for example respiratory depression due to accumulation of active morphine metabolites.¹³ Ageing is also associated with altered activity and responsiveness to vasoactive stimuli (heightened responses to vasoconstrictor stimuli but impaired vasodilatory responses).¹⁴ NSAIDs induce renal vasoconstriction which compromises kidney function, especially among those with pre-existing kidney impairment, or taking diuretics or angiotensin-converting enzyme inhibitors.¹⁵

Generally, dosage reductions, or longer dosing intervals, are recommended for older people to prevent drug accumulation and minimize the side effects of opioids. The recommended dose reduction in older persons is 25%–50% of the dose given to younger patients.¹⁶

Under-prescribing of analgesia

Assessment of pain has also been reported to be inadequate among healthcare professionals.^{17–19} Not all older people seeking medical attention were assessed for the presence or absence of pain.¹⁸ When pain was identified, it was not comprehensive enough. Important questions such as how movement affects pain and treatment response were irregularly assessed.¹⁹ Clinicians were reported to be hesitant to prescribe opioids even when they were clinically appropriate because of concerns over adverse effects, potential patient addiction and the risk of drug overdose.²⁰ Inadequately treated pain is associated with a variety of negative outcomes which may influence pain perception and coping capability, creating a vicious downward spiral.

Therefore, appropriate prescribing involves analgesia that matches the severity of the person's pain. For instance, slow upward titration of analgesia in an older person with a limb fracture would not be suitable as fracture-related pain is most intense in the acute period. Opioids may be the right analgesia at this stage. Once analgesia has been started, regular reviews and titration of analgesia is a must. Hospital admission is advisable if rapid titration and close monitoring of treatment response is needed. Otherwise, the older person and his or her carer will need clear communication of the treatment plan, what to do if pain worsens, red flag features to look out for and how to seek help if required.

Multidisciplinary approach

Managing pain requires a holistic approach. Pain is a distressing symptom with numerous ill effects. Pain can lead to immobility

and that itself can cause weakening of skeletal muscles. Hence, addressing pain as a symptom alone is never enough. The overall management has to take into account other health issues. For instance, an older person with dementia who was not able to voice out their need for analgesia would require a very different treatment strategy to someone who does not have dementia. Therefore, a multidisciplinary approach is often required for this particular cohort. Specialist pain services can support usage of analgesics and provide non-opioid options. Physiotherapists can help the older person ambulate safely and occupational therapists can provide input into how to maintain a reasonable level of daily living despite the pain. Each will ultimately bring their respective range of knowledge and attitudes to pain management within this multidisciplinary setting. ■

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