The emotional and physical burden of pain in older people

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The effect of COVID-19 restrictions on mobility, mental well-being, and the perception and management of pain

Chronic, or persistent, pain is defined as pain that persists longer than the normal healing time and thus lacks the acute warning function characteristic of physiological nociception. Chronic pain constitutes a substantial healthcare burden, as it affects approximately 20% of people worldwide and accounts for 15–20% of physician consultations.[1]

In older adults, persistent pain, defined as a painful experience that persists or recurs for more than three months,[2] is associated with anxiety, depression, falls, frailty, functional loss, gait change, higher health costs, low quality of life, polypharmacy, sleep disorder, social isolation, and weight loss.[3,4] Factors linked to greater risk of pain developing or persisting include general physical health, mental health (e.g., depression, anxiety, and stress), physiological factors (e.g., obesity), and lifestyle factors (e.g., physical activity levels, smoking, and sleep).[5]

The experience of pain is determined by complex interactions between ascending peripheral signals and the modulation of these signals by the central nervous system through descending facilitatory and inhibitory systems.[6] Many chronic pain syndromes display greater pain facilitation of pain and reduced pain inhibition. Additionally, ageing appears to be associated with a dysregulated pain profile, and the age-related imbalance of pain facilitation and inhibition makes older adults more susceptible to developing chronic pain compared with younger adults.[7]

Physical activity is an important factor for healthy ageing, and low levels of physical activity are associated with non-communicable diseases such as cardiovascular disease and diabetes and an increased risk of all-cause mortality.[8] Additionally, an accelerated deterioration of muscle mass and muscle function aggravates long-term health conditions prevalent among older adults such as cardiovascular disease, cognitive decline, depression, diabetes, frailty, and osteoporosis.[9,10]

Before the emergence of the 2019 coronavirus pandemic, a majority of older adults were found to lead largely sedentary lives, with almost 60% of older adults sitting for more than 4 hours per day.[8] This sedentary lifestyle among older adults was reinforced by the general quarantine, isolation, travel ban and social distancing response to the COVID-19 pandemic, and had an overall negative impact on the mobility and physical and mental well-being of older adults.[9,11]

The vicious cycle of chronic pain and avoidance of physical activity

Although pain is normally a protective response to injury, prolonged reductions in muscle movement to avoid pain may contribute to disability and the chronicity of many pain conditions, especially in older adults.[12,13] In general, older adults are typically less physically active than younger adults, and experience more chronic pain.[14] However, physical activity helps preserve the endogenous pain inhibiting system into old age. Older adults who are physically inactive have weak endogenous pain inhibition, which may lead to a vicious circle where weaker pain inhibition leads to more pain, which leads to reduced physical activity and further reduced pain inhibition.[7] Low levels of physical activity increase the risk of pain progression, which may lead to avoidance of physical activity and a reinforcement of the vicious cycle of chronic pain and inactivity.[15] The reduced mobility and avoidance of physical activity as a consequence of pain may cause a 20%–30% increased risk of dying, particularly due to cancer and cardiovascular disease.[15] In older adults, physical activity needs to be personalised to the unique needs of each individual and should involve endurance, flexibility, and strength exercises. To improve motivation and reduce barriers to physical activity, educational initiatives are often helpful to communicate the rationale and benefits of moderate exercise.[16]

The impact of pain on quality of life

Pain and diseases associated with pain are leading causes of disease and disability burden globally,[17] and chronic pain conditions such as neuropathic pain and multisite pain have a particularly detrimental effect on both physical and psychological health and well-being.[18]

Persistent and chronic pain has a wide-ranging impact both on quality of life and relationships and interferes with both physical and mental health aspects of daily living.[19,20] The impact and prevalence of musculoskeletal conditions, which increase with ageing, are leading causes of persistent pain, impaired function and mobility, reduced mental well-being, and reduced quality of life.[21] Pain may disrupt sleep, reduce the refreshing quality of sleep, aggravate anxiety and depression, and destroy self-efficacy,[22] and chronic pain patients with low self-reported health report high levels of loneliness, low friendship quality, and high levels of perceived rejection.[23]

Additionally, chronic pain makes people more vulnerable to social isolation, which may lead to exacerbation of symptoms.[24] During the COVID-19 pandemic, increased loneliness and social isolation were found to be associated with increased incidence and prevalence of pain intensity and chronic pain.[25] Furthermore, patients with pain and depression experience reduced physical, mental, and social functioning as opposed to patients with only depression or only pain.[26] Importantly, major depression increases the risk of developing future chronic pain, and chronic pain and pain catastrophizing are mutually reinforcing determinants for chronic depression and form a vicious cycle of pain and depression.[27]

The challenges of pain management in older adults

Although more people live longer, many experience pain as a major part of their health problems, which increases the burden on healthcare systems.[16,28] Pain in older adults is frequently associated with frailty (i.e., unhealthy ageing) and treating pain as a stand-alone clinical symptom may therefore be of limited value if the older adult's overall life, social circumstances, and systemic health are not taken into consideration.[5]

Older adults frequently experience musculoskeletal pains due to osteoarthritis, low back pain, and neuropathic and cancer-related pain,[16,29] and poorly controlled chronic pain affects approximately 40% of older adults living in the community and 80% of the nursing home population. Adding to this burden is the fact that it is also frequently under-reported and insufficiently assessed.[30]

Although older people often live with pain that negatively impacts their quality of life, some older adults have a tendency to stoically accept chronic pain, and demonstrate fear avoidance beliefs, which leads to treatment avoidance and poor engagement with healthcare recommendations. This may, unfortunately, further exacerbate disability and escalate disease chronicity.[16]

Pain in older adults is a challenging problem for healthcare professionals, as there are significant differences in the management of pain in older adults compared to younger patients. From a clinician point of view, concomitant chronic illnesses in older adults make pain evaluation and treatment more challenging in older adults. Additionally, older adults frequently respond differently to pharmacological therapies, and often experience reduced treatment effectiveness and more severe adverse events.[31] Furthermore, most older adult patients living in nursing homes experience some degree of cognitive impairment which may impact on their ability to communicate pain to the healthcare provider and may therefore lead to inadequate assessment and management of pain.[32,33]

Additionally, comorbidities and associated polypharmacy complicate the evaluation and management of pain in older adults. Importantly, adverse events related to pharmacological therapies are more frequent in older adults compared to younger adults, particularly in the presence of polypharmacy and comorbidities, such as age-related renal impairment.[34] These factors need to be carefully considered when new treatments are being introduced so that the risk of drug-drug and drug-disease interactions are minimised.[16]

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