Chapter

Pain Management in Older Persons

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Abstract

Pain is a common symptom in the elderly and it is problematic and distressful especially if the polder person is dependent on a caregiver. Pain keeps the sufferer uncomfortable and can affect the person from carrying out daily activities and tasks especially activities of daily living. Pain in the older person may be acute or chronic. Some of the causes of pain in the elderly are neuralgia, musculoskeletal dysfunction especially osteoarthritis, emotional and mental problems, cancer and several other causes. The assessment of pain in the elderly is done using validated pain assessment tools such as the visual analogue scale, verbal rating scales, numeric rating scales, McGill pain assessment questionnaire, pain attitudes, brief pain inventory, and geriatric pain measure. Management of pain in older persons involves non-pharmacological and pharmacological methods. There are some barriers and challenges of pain management in the elderly and also consequences when pain is not properly managed or not managed at all in an older person.

Keywords: older person, pain, non-pharmacological management, opioids, nursing home

1. Introduction

The numbers of older persons are increasing worldwide; which means there will also be an increase in their health needs [1–13]. Sometimes health issues concerning older persons are neglected [14]. The aging process affected by several factors. Older persons may have more than one disease leading to comorbidities as well as chronic pain [14–18]. Generally pain is a common complaint in senior citizens but it is not part of the aging process as pain in the elderly is underreported and under treated [9, 13, 15, 17, 19]. Pain management in older persons is problematic due to the various changes associated with the aging process that occur in the different body organs and systems [10]. The perception of pain is beneficial for survival [15]. Pain management is an important aspect of healthcare [20]. The rudiments of effective pain management includes close monitoring for adverse effects, regular assessment of the pain using various validated pain assessment tools and adjustment of the dose of analgesics administered to the corresponding response. Any pain causing physical and psychosocial functionality problems should be regarded as a significant health problem [15]. Pain is the most common reason why an older person will consult a physician [21].

2. What is pain?

Everyone feels pain though some researchers argue that neonates do not feel pain. The word pain is derived from the Greek word, which means penalty in Greek [20]. The taxonomy of the International Association for the Study of Pain (IASP) defines pain as 'an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage [20, 22–24]. Pain is a complex phenomenon characterized by a sensory and emotional experience that is unpleasant [25–27] and it is also distressing [28]. Pain is the most common symptom complained by the elderly [29]. Older people tend to underreport pain due to several barriers and challenges such as cultural beliefs and ageism [29]. Pain management is generally under diagnosed, overlooked and undertreated in older adults [15, 27, 30]. Pain is a subjective personal experience known only by the sufferer [30].

3. Prevalence of pain in older persons

The prevalence of pain in the older persons varies, pain is prevalent in older persons and this increases with age [9, 31, 32]. The knowledge of the prevalence of pain in the oldest old is scarce [33]. Several studies have been conducted on pain in older persons. Many reports suggest that the incidence of pain in senior citizens is about 50% in older adults living in the community and about 80% in older persons who are resident in nursing homes [17, 21, 25]. The pain is of significant intensity in 19% of older persons.

4. Types of pain

Pain can be classified as acute or chronic pain depending on its duration. It can also be classified depending on the cause of the pain if it is nociceptive pain that is visceral or somatic origin or neuropathic pain. The prevalence of acute pain in the elderly does not change with aging while that of chronic pain increases with aging [29]. Acute pain is usually a symptom of an illness or injury while chronic pain may be a pointer to specific health problems, as the factors leading to chronic pain may not be identified or eradicated all the time [29].

Chronic pain is now also known as recurrent or persistent pain. Chronic pain occurs for a prolong period of time usually more than three months [21] which may or may not be associated with a well-defined disease process [34], and it is an important health problem in the elderly [24, 34, 35]. Chronic pain is prevalent in the elderly [36, 37]. The clinical manifestations of persistent pain the older persons are often complex and multifactorial [26].

Acute pain can be defined as pain that is of distinct onset, there is an obvious cause and also of a short duration, it indicates acute injury or disease [21]. Persistent pain is common among residents of nursing homes.

5. Causes of pain in older persons

There are several causes of pain in older persons.

1. Pain in the lower extremities for instance can be caused by osteoarthritis which could lead to falls [10, 21, 38]. Osteoarthritis is one of the commonest causes

of joint pain and disability in the elderly hence the goal of its treatment is to reduce its symptoms and prevent disability [21].

2. Low back pain, this may be caused by arthritis, muscular and neurological changes associated with aging [10, 24, 29, 31, 39].

3. Joint arthrosis

4. Depression

5. Intestinal diverticulosis

6. Night time leg pain [26]

7. Spinal cord stenosis [29]

8. Myofascial pain [29]

9. Fibromyalgia [29]

10. Post herpetic neuralgia [29]

11. Post stroke pain syndrome [29]

12. Diabetic peripheral neuropathy [29]

13. Cancer [29]

14. Complications related to gait abnormalities, accidents and polypharmacy [9].

6. Assessment of pain in older persons

There are various ways of assessing pain in older persons and this is challenging for various reasons such as those with diminished cognitive ability, dementia, disorders in communication, and cultural barriers [13, 19, 21, 30, 31, 36, 40, 41]. The first step in an effective pain management is assessment of the pain [31]. Assessment of pain in older persons should include the assessment of the older person functional abilities [10, 42] and it requires a multidisciplinary approach for making a diagnosis. This includes understanding the atypical presentations of pain in older persons including its pathophysiology, the physiological changes associated with aging, common pain presentations and the use of validated pain assessment tools [11, 19, 36]. Self-reporting is the best method of assessing pain and there is a wide range of self-report scales as it provides the most accurate and reliable information [36, 43].

There are many validated pain assessment tools that can be used in the assessment of pain in older persons while each of the tools have its merits and demerits as no single tool will be useful for every patient [39, 43]. Commonly used scales in the assessment of pain in older persons are the visual analogue scales, verbal rating scales, numeric rating scales, McGill pain assessment questionnaire, pain attitudes, brief pain inventory and geriatric pain measure [33, 40, 43]. There may be other medical signs and symptoms that can make the pain assessment difficult [13]. Polypharmacy increases sensitivity to analgesics [35]. Sometimes elderly persons find it difficult using self – report pain scales correctly [38, 43].

7. Treatment of pain in older persons

The management of pain in the elderly can be challenging [14, 15, 35, 42], proper assessment of the pain is very important for its management [44]. Pain management in older persons requires a multidisciplinary approach with the use of non-pharmacological techniques and pharmacological agents that is analgesics and adjuvants [9, 13, 15, 19, 21, 37, 45]. The approach to pain management in older persons differs from that of younger person's [26, 31, 37]. The multidisciplinary approach to pain management in the elderly addresses both the medical and psychosocial requirements of the older person and this involves pharmacotherapy, psychological support and sometimes physical rehabilitation [9, 10, 31] all aimed at the reduction of the pain and improvement of the quality of life [15, 45]. History taking is done; if there is cognitive impairment history may be taken from the caregiver [42]. Older persons cope with pain better than younger people as some people believe that pain is part of the aging process [39].

7.1 Non-pharmacological treatment of pain in older persons

There are many forms of non-pharmacological mode of pain management in older persons, this includes:

1. Exercise, this helps to maintain movement hence it helps the older persons to be active, retain muscle tone and have a greater social interaction [15, 21, 38].

2. Weight reduction [15]

3. Massage [45]

4. Electrotherapy for example transcutaneous electrical nerve stimulation (TENS) [21].

5. Acupuncture, this involves the insertion of special acupuncture needles into designated acupuncture points that are then stimulated with either electrical current or manual manipulation [21].

7.2 Pharmacological treatment of pain older persons

The pharmacological management of pain in the elderly involves the use of the three step World Health Organization analgesics ladder, which is an accepted pain plan universally [21, 36, 46]. The pharmacological management of pain in older persons also involves taking into consideration any existent comorbidity and medications taken for other illnesses to avoid drug-drug interactions and side effects [13, 29, 31, 34]. As in the use or administration of any therapeutic agent, older persons are at risk of adverse reactions [13, 15, 31, 38]. Effective pharmacological treatment of pain involves proper assessment of the pain [26]. The physiologic changes associated with aging affect the pharmacokinetics and pharmacodynamics of drugs in the elderly [36]. Multimodality is required which involves the use of different drugs [13, 47]. Traditionally, analgesics are classified into three groups' namely peripheral analgesics such as acetaminophen; non-steroidal anti-inflammatory drugs (NSAIDs) and opioids.

1. **Acetaminophen:** The pharmacological management of pain in the elderly involves the use of acetaminophen marketed in most countries as paracetamol.

Acetaminophen is the commonly used analgesic [10, 36, 44]. It is used in the first step of the pain management ladder of the World Health Organization [10]. The general approach in pain management in the elderly is to start with a non-opioid such as acetaminophen and non-steroidal anti-inflammatory drugs and then use opioids for severe pain [13].

2. **Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)**: These are non-opioid analgesic agents example of NSAIDs are ibuprofen, piroxicam, diclofenac, ketoprofen, etc. One of the adverse effects of NSAIDs is irritation of the lining of the gastrointestinal tract which can lead to hemorrhage therefore it is not taken in an empty stomach and it is administered with caution in patients with peptic ulcer disease. Prolong use of NSAID generally should be avoided in older persons due to association with gastrointestinal bleeding and renal dysfunction [13].

3. **Opioids:** Opioids is used in the management of severe pain both acute and chronic pain, also used in the management of different types of pain such as nociceptic and neuropathic pain [13, 32]. Several factors affect the pharmacokinetics and pharmacodynamics of opioids such as changes associated with the normal aging process as there is a natural decline in the functions of organs and comorbidities are common in older persons [38, 47]. One of the side effects of opioids especially in senior citizens is respiratory depression [48]. Adverse effects on the central nervous system and others are the same for the general population. There is greater risk of side effects in older persons [36]; one of the feared adverse effects of the use of opioids in the elderly is the risk of falls [38]. Therefore management of pain in older persons should include the physician's experience as fear of the adverse effects frequently hinders prescribing analgesics for older persons [26, 38].

4. **Adjuvants Therapy**: Adjuvants used in the treatment of pain in older persons are tricyclic anti-depressants, topical local anesthetics such as topical lignocaine (lignocaine patch), anti-epileptics hypnotics, anxiolytics and anti-psychotics [33, 44].

7.3 Barriers and challenges of pain management in older persons

There are many barriers and challenges to the management of pain in older persons [9, 14, 37, 48]. Pain poses a challenge for both senior citizens and their caregivers [13, 37, 38, 42].

1. Older persons sometimes may be reluctant to report pain hence the pain is not assessed at all and not treated properly or sometimes the pain is diagnosed and treated late [9–11, 13, 15, 16, 19, 31, 35–37, 40, 42, 48, 49].

2. Older persons generally under report pain and therefore it is under treated [13, 15, 19, 21, 26, 31, 33, 36, 42–44].

3. Changes associated with aging such as the pharmacokinetics and pharmacodynamics of drugs and other physiologic changes of the aging process [9, 13, 31, 32, 37].

4. Cultural and religious beliefs that pain is part of the aging process [9, 10, 13, 21, 32, 35, 40].

5. Fear of the manifestation of side effects of opiates which is common in the older persons especially as the older persons is prone to comorbidity [13, 21, 25, 26, 32, 36, 37].

6. Changes in the perception of pain in older persons such as when there is cognitive impairment, dementia, sensory impairment, inability to communicate well, depression, functional impairment, delirium [9, 14, 15, 19, 21, 25, 26, 30, 31, 33, 36, 38, 40, 41, 43, 44]. Depression can alter the perception of pain and also the ability to cope with it [36].

7. Fear of falls and addiction from the administration of opioids [38].

8. Polypharmacy [13, 37].

9. Ageism.

8. Consequences of untreated pain in older persons

There are several effects if pain is not adequately or improperly treated in the older persons, these include:

1. Problems with sleep such as inability to initiate or maintain sleep [49].

2. Problems with mood with the risk of depression and social isolation [19, 43, 49].

3. Interference with the activities of daily living [35].

4. Untreated pain in older persons interferes with all aspects of the older person's life, physical, psychological, social and this can lead to poor quality of life [10, 19, 21, 31, 35, 37, 39].

9. Post-operative pain management in older persons

There has been an increase in the incidence of older persons requiring surgical interventions which it requires proper and adequate pain management after the surgery [38]. Adequate perioperative and post-operative pain management in older persons reduces the risk of post-operative delirium [38]. Use of regional anesthesia reduces postoperative complications and improves post-operative pain control [41, 50]. Multimodal drug therapy should be instituted as it has the advantage of minimizing both the dosages and side effects of any single agent [38, 41, 50].

10. Pain management in nursing homes

Pain is common among residents of institutionalized homes [21, 48]; this presents multifaceted challenges for healthcare practitioners [27]. It provokes a significant challenge to the nursing home caregivers in terms of their ability to provide adequate treatment [48]. Generally patients residing in nursing homes are more frail that other older persons living in the community [48].

11. Conclusion

Pain is common in older persons and may be caused by a variety of disease states. There are many challenges in managing pain in older persons when the pain is not adequately or properly treated, it can lead to some consequences such as sleep disturbance and changes in mood.

Conflict of interest

I have no conflict of interest.

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