

Original Research Article

Analysis of pain manifestation and its management in adults

Abstract

Introduction: Pain is associated with substantial disability from reduced mobility, avoidance of activity, falls, depression and anxiety, sleep impairment, and isolation. **Objectives:** The main objective of the study is to clinically analyse the pain manifestation and its management in adults. **Methods:** This cross sectional clinical audit was done in Shaikh Zayed hospital Lahore during January 2020 till June 2020. The data was collected from a large number of patients undergoing intermediate to major surgery and thus have high analgesic requirements. Medical folders that were not available or had missing notes were excluded. The folders were requested from the Medical Records Department and reviewed by four investigators. **Results:** The data was collected from 169 patients. The mean age of the patients was 38 years. Pain was assessed in 85 of the 168 patients (51%) (62 of the 110 urogynaecology patients; 23 of the 58 orthopaedic patients) and reassessed in 55 of the 85 patients (65%) who had received an initial pain assessment. The ward doctor (intern, registrar or specialist) assessed pain in 67% of the 85 patients evaluated. **Conclusion:** It is concluded that a significant proportion of the pain interventions appeared to be based on the professional knowledge of the practitioner and not supported by evidence-based guidelines of pain management.

Introduction

Pain is associated with substantial disability from reduced mobility, avoidance of activity, falls, depression and anxiety, sleep impairment, and isolation. Its negative effects extend beyond the patient, to disrupt both family and social relationships. Chronic pain poses a significant economic burden on society. Prevalence rates for pain are expected to increase as

populations continue to age by 2035 an estimated one quarter of the population in the European Union will be 65 or older thereby increasing the public health impact of pain¹.

Healthcare providers, irrespective of specialty, should develop competencies to assess and manage chronic pain in their older patients. In this review we summarize recent evidence on the assessment and management of pain in older patients. Evidence is taken from systematic reviews, meta-analyses, individual trials, and clinical guidelines².

Pain is a subjective phenomenon defined by the International Association for the Study of Pain as an 'unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage'. It can be classified based on its time course as either acute or chronic. Acute pain has an abrupt onset and may last up to 6 months if poorly managed³.

Thereafter, it evolves into chronic pain via maladaptive neuroplasticity. Inadequate management of pain results in undesired outcomes, including poor patient satisfaction, impaired immunity, delayed wound healing, prolonged hospital stay and increased hospital costs⁴. In spite of advances in pain management techniques and analgesics, it is estimated that one in five adults suffer from pain with the predominant causes being trauma, inflammation, neoplasm and circulatory changes. Of the patients in the surgical trauma subgroup, more than 80% experience acute pain in the postoperative period with nearly three-quarters describing their pain as significant, that is, moderate, severe or extreme⁵⁻⁶.

Objectives

The main objective of the study is to clinically analyse the pain manifestation and its management in adults.

Methods

This cross sectional clinical audit was done in Shaikh Zayed hospital Lahore during during January 2020 till June 2020. The data was collected from 169 patients. The data was collected from a large number of patients undergoing intermediate to major surgery and thus have high analgesic requirements. Medical folders that were not available or had missing notes were excluded. The folders were requested from the Medical Records Department and reviewed by four investigators. The variables observed in this audit were: age, gender, admission ward, cognitive disability, functional impairment, native language, type and number of surgeries undertaken, number of pain assessments recorded, pain assessor, assessment tool, pain management plan and delivery, and any reassessment conducted after the planned intervention.

Pain assessment and management scale

The pain assessment tools of interest were the Verbal Rating Scale (mild, moderate and severe), Wong-Baker Faces Pain Rating Scale, Numeric Rating Scale, Visual Analogue Scale, McGill Pain Questionnaire and Pain Quality Assessment Scale.

Data analysis

Data were coded and entered in Microsoft Excel 2017 and statistical analyses conducted using Stata version 10. Associations between pain assessment and variables, such as gender, age group, native language, cognitive impairment and admission ward, were determined using Pearson's chi-squared test. Significance was accepted at $p < 0.05$ throughout.

Results

The data was collected from 169 patients. The mean age of the patients was 38 years. Pain was assessed in 85 of the 168 patients (51%) (62 of the 110 urogynaecology patients; 23 of the 58 orthopaedic patients) and reassessed in 55 of the 85 patients (65%) who had received

an initial pain assessment. The ward doctor (intern, registrar or specialist) assessed pain in 67% of the 85 patients evaluated.

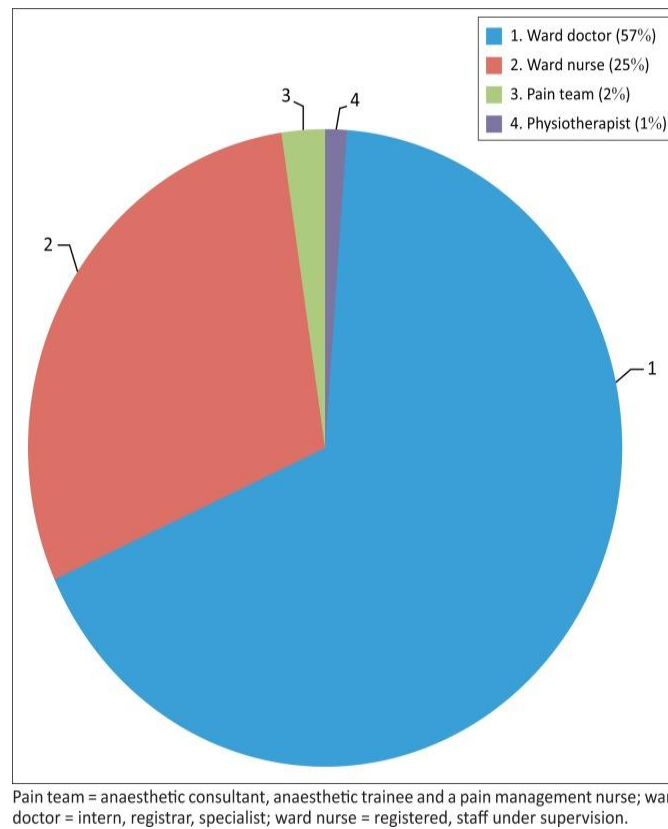


Figure 1: Diagram showing the distribution of members

A pain management plan was documented for 140 of the 168 patients (83%), irrespective of them having a documented pain assessment. Of the 83 patients who had no documented pain assessment, 70% had a pain management plan.

Table 01: Pain management methods used

| Methods | All patients number | % | Orthopaedics number | % | Urogynaecology number | % |
|---|---------------------|------|---------------------|------|-----------------------|------|
| Empirical therapy | 106 | 75.7 | 37 | 77.1 | 69 | 75.0 |
| Step-up medication (medical therapy only) | 126 | 18.6 | 24 | 8.3 | 22 | 23.9 |
| Step-up medication and physiotherapy (medical and | 26 | 4.3 | 5 | 10.4 | 1 | 1.1 |

| | | | | | | |
|---|------------|----------|-----------|----------|------------|---|
| physical therapies) | | | | | | |
| Step-down medication (medical therapy only) | 9 | 0.7 | 2 | 2.1 | 4 | - |
| Other | 2 | 0.7 | 1 | 2.1 | 4 | - |
| Total | 169 | - | 69 | - | 100 | |

Discussion

Chronic pain is one of the most common conditions encountered by healthcare professionals, particularly among older (≥ 65 years) patients. Pain is associated with substantial disability from reduced mobility, avoidance of activity, falls, depression and anxiety, sleep impairment, and isolation. Its negative effects extend beyond the patient, to disrupt both family and social relationships⁷. Chronic pain poses a significant economic burden on society. Prevalence rates for pain are expected to increase as populations continue to age by 2035 an estimated one quarter of the population in the European Union will be 65 or older thereby increasing the public health impact of pain. Healthcare providers, irrespective of specialty, should develop competencies to assess and manage chronic pain in their older patients⁸.

Management of pain in later life can be complex; problems with both nociceptive and neuropathic pain are common and often coexist. Nociceptive pain arises from actual or threatened damage to non-neural tissue through activation of nociceptors, whereas neuropathic pain occurs as a consequence of abnormalities in the central or peripheral somatosensory nervous system⁹. Management is further complicated by age related physiologic changes, which lead to altered drug absorption and decreased renal excretion, sensory and cognitive impairments, polypharmacy, and multimorbidity, particularly chronic conditions such as disorders of gait and balance, and kidney, lung, and cardiovascular disease¹⁰.

Conclusion

It is concluded that a significant proportion of the pain interventions appeared to be based on the professional knowledge of the practitioner and not supported by evidence-based guidelines of pain management. Pain management is not merely about the reduction of pain; it is also about the optimisation of recovery through a reliable and accurate assessment of pain, which was not demonstrated in this study.

Recommendations

It is recommended that an assessment tool, which integrates the bio psychosocial factors that influence the pain experience, should be employed by a multidisciplinary team to facilitate goal-directed therapy. We recommend that a multidisciplinary education and training programme on pain assessment, management and documentation be implemented using evidence-based protocols, case-based teaching and a multifaceted pain assessment tool.

Action plan

Despite the several limitations, our paper points out some important management points regarding pain in adult patients.

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