

RESEARCH ARTICLE

Assessment of Prevalence and Characteristics of Pain and Its Association with Quality of Life in Elderly

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ABSTRACT

Background: Last century has witnessed great advancement in the medical field which has resulted in a significant increase in mean survival age. Elderly population present with increased incidence certain pain syndromes increases. Despite this pain is often underreported in elderly patients due to incorrect belief that pain is a normal process of aging. Pain is a serious concern especially in the later years of life, however, very little is known about its incidence in elderly patients. This is due to a lack of systematic epidemiological surveys considering pain as a physiological problem in the elderly.

The aim of this study is to determine the prevalence of pain in the geriatric population, to assess the characteristics of pain and to study its association with depression and functional mobility.

Methods: This was a prospective study, in which a questionnaire concerning pain and multidimensional assessment tools for depression and functional mobility was administered to 200 patients above 65 years of age visiting the Geriatric Clinic of Department of Medicine.

Results: Prevalence of pain was found to be 69.5%, i.e., 139 patients experienced pain out of 200. Amongst the patients who suffered from pain, 79% of the patients complained of the musculoskeletal type of pain, the majority of it being knee joint pain followed by low back pain, 12% suffered from neuropathic pain and 9% suffered from a mixed type of pain. The intensity of pain was measured using a visual analog scale (VAS) score. 21% of the patients had mild pain, 65% had moderate pain and 14 % had severe pain. It was found that 13% of patients experienced pain for less than 1 year, 21% had pain between 1 and 2 years, 38% experienced pain for 2–3 years and 28% of them had pain for more than 3 years. Our study showed a positive correlation between

depression and duration of pain, i.e., an increase in the duration of pain increases depression scores. We found a negative correlation between functional mobility and duration of pain, i.e., as the duration of pain increases, the functional mobility decreases.

Conclusion: Assessment and treatment of prolonged and persistent pain in the elderly is challenging. As the patient's age, the prevalence of pain increases. The consequences of chronic pain in the elderly include impaired activities of daily living (ADLs) and ambulation, depression all of which result in poor quality of life.

Keywords: Chronic pain, Depression, Elderly patients, Pain and activities of daily living, Pain assessment, Pain prevalence.

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INTRODUCTION

It has been observed that the fastest growing segment of the world's population is the elderly population.¹ It is expected that by the mid-21st century, the number of people in their 60s and older will constitute 25% of the world's population, with the most noticeable increase occurring in developing countries.² Elderly age group experience increased incidence and prevalence of certain pain syndromes. This could possibly be due to deterioration of health due to chronic diseases.¹ Musculoskeletal pain, including rheumatological diseases and arthritis, is the most common source of pain affecting the elderly, followed by cancer pain. Very often, pain is not treated at all or insufficiently treated, resulting in physical and mental deterioration in this age group. As a result, the consequences of chronic pain in the elderly include impaired ADLs, decreased ambulation, depression, and strain on the health care economy.

Pain is not just a perception of noxious stimuli, and it is much more than that. Its ability to physically debilitate an already frail individual is well established, however, its implication on mental health and wellbeing is not routinely observed and analyzed. The present study was hence undertaken to not just to assess pain and its characteristics, but also to correlate pain with functional mobility and depression.

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Primary Objective

- To determine the prevalence of pain in the geriatric population

Secondary Objectives

- To assess the intensity of pain
- To study the nature and site of pain.
- To study the correlation between duration of pain with functional mobility and depression.

METHODS

The study was conducted on 200 patients, visiting the geriatric clinic of JSS Medical College and Hospital, Mysuru. Patients above the age of 65 years who were oriented enough to answer the questionnaire were included in the study, whereas patients suffering from Neoplastic disorders and debilitating illness and patients with severe dementia and severe cognitive dysfunction were excluded from the study.

All patients were questioned about the presence or absence of pain. If present, the intensity of pain was assessed using VAS, where 0 = no pain; 10 = excruciating pain. Based on VAS score, patients were classified as score 1–3 which was mild pain, score 4–6 as moderate pain and score 7–10 as severe pain. Duration, site, and type of pain were assessed.

Depression was assessed using the geriatric depression scale (GDS). A score of 0–5 is normal and score greater than 5 suggests presence of depression.

Functional mobility was assessed using the Barthel index. Patients were classified based on their scores. A score of 20 was considered independent, between 18 and 19 was classified as slight dependence, scores between 16 and 17 were considered moderate dependence, and scores ≤ 15 was considered as severe dependence.

Statistical Analysis

The study was a prospective observational study. The sampling technique used was prospective sampling. Data were analyzed using Statistical Package for the Social Sciences (SPSS) version 22. Descriptive statistical measures like percentage, mean and SD was applied. Inferential statistical tests like Chi-square test and Spearman rank correlation were applied. The results were interpreted statistically significant at $p < 0.05$.

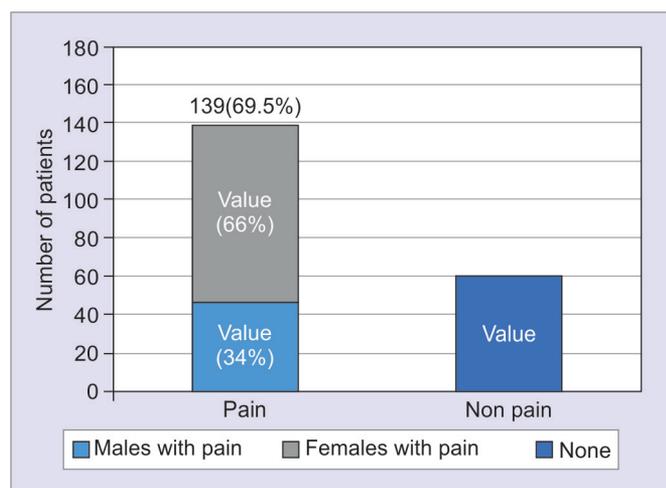
RESULTS

In our study, we found that 139 patients experienced pain out of 200, which means the prevalence of pain, was found to be 69.5%. Of the patients who had pain, 66% (92 patients) were females and 34% (47 patients) were males (Graph 1).

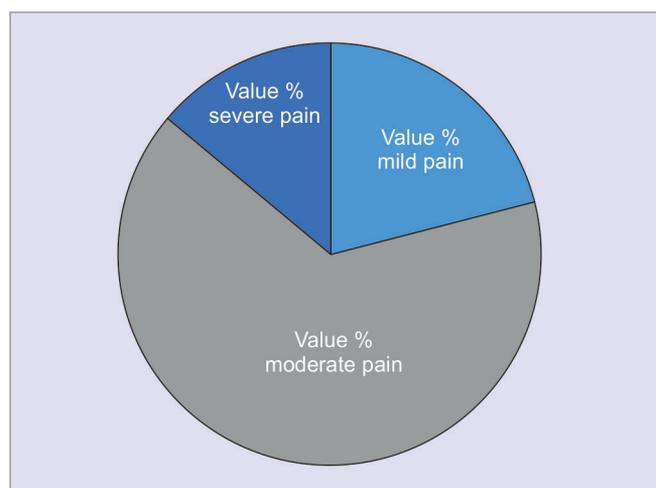
The intensity of pain was measured using the VAS score. Twenty-nine patients (21%) of the patients had mild pain, 90 patients (65%) had moderate pain and 20 patients (14 %) had severe pain (Graph 2)

It was found that amongst the patients who suffered from pain, i.e., out of 139 patients, 110 patients (79%) of the patients suffered from musculoskeletal type of pain while 17 patients (12%) expressed neuropathic pain and 12 patients (9%) expressed a mixed type of pain which was a combination of musculoskeletal and neuropathic pain. Out of 110 patients who experienced musculoskeletal pain, knee joint pain was commonest and seen in 75 patients (68%), followed by low back pain which was experienced by 10 patients (9%) and the remaining 25 patients (22.7%) experienced pain in other areas (Graph 3).

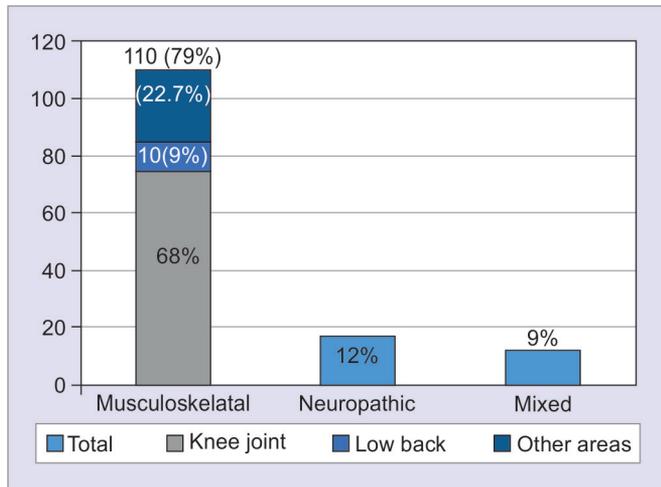
Sixteen percent of the patients complained of pain at one site. Sixty percent of the patients complained of pain in two sites. About 24% complained of pain at multiple sites, most common being upper limbs, lower limbs, backache, and headache (Graph 4).



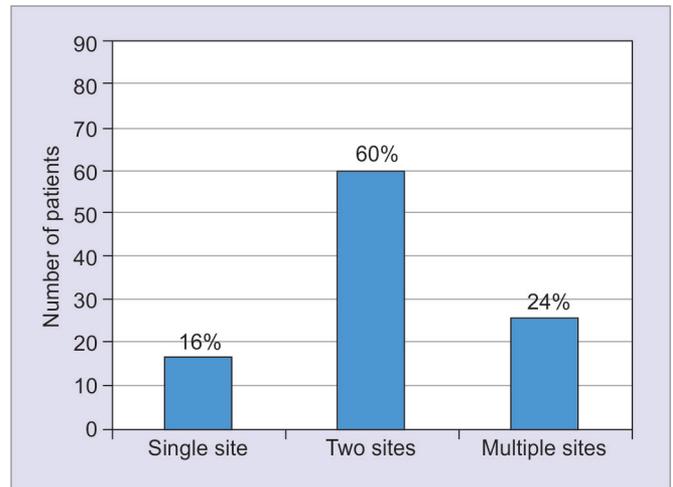
Graph 1: Prevalence of pain



Graph 2: VAS score for intensity of pain



Graph 3: Type of pain



Graph 4: Sites of pain

It was found that out of 139 patients who had pain, 18 patients (13%) experienced pain for less than 1 year, 29 patients (21%) had pain between 1 and 2 years, 53 patients (38%) experienced pain for 2–3 years and 39 patients (28%) had pain for more than 3 years. (Graph 5)

Our study showed that an increase in the duration of pain increases depression scores. The positive correlation between GDS and duration of pain was $r = 0.73$ (p value < 0.0001) (Graph 6)

Functional mobility of the patients was assessed using the Barthel index. In our study, we found a negative correlation between functional mobility and duration of pain where was -0.59 (p value < 0.0001) (Graph 7). As the duration of pain increases, the functional mobility decreases.

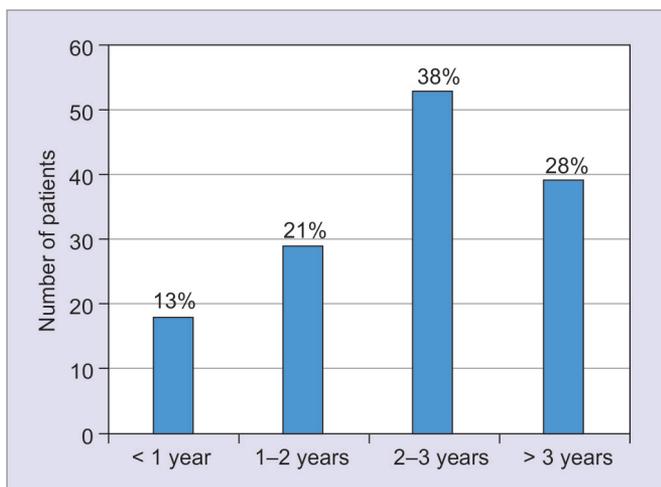
Of all the patients who complained of pain, 84% were willing to report pain, and 16% did not report pain as they thought that pain was a normal process of aging.

DISCUSSION

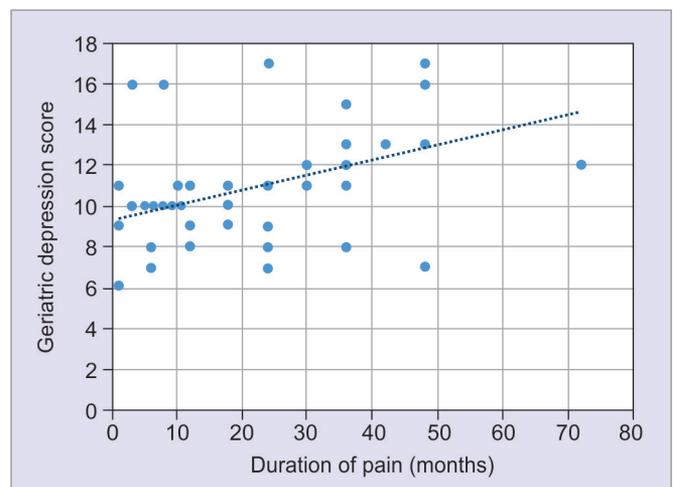
Assessment of pain is instrumental and forms one of the fundamental issues regarding pain management in

any age group. This becomes all the more challenging in the elderly due to the age-related physical and mental changes.³ Pain in the elderly presents as an interdisciplinary challenge with the demographic data showing the number of people in old age on the rise. Pain in older adults is often chronic and multidimensional. It is also important to analyze other factors associated with pain such as comorbidities, their mental state, beliefs about pain, ways of coping with the pain and their social support also has to be taken into consideration.⁴

Until very recently, our knowledge of the prevalence of pain in the elderly was relatively poor and lacked attention. The pain was believed to be part of the physiological aging process and was hardly investigated in its own right. However, there has been an increasing number of studies on the prevalence of pain in the elderly over the last decade. A varied range of prevalence of any pain from as low as 0% to as high of 93% was observed in the elderly, clearly illustrating how variations in the studied population, methodology, and definitions used can affect prevalence estimates.⁵ In our study, the prevalence of



Graph 5: Duration of pain



Graph 6: Correlation between geriatric depression score and duration of pain

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