



## Assessment of Chronic Musculoskeletal Pain Management in Elderly Patient at General Hospital in Patna City, India

Author

**Dr MD. Farid Alam Ansari**

Department of Medicine, Patna Medical College & Hospital, Patna

Email: [firdausinshasan@gmail.com](mailto:firdausinshasan@gmail.com)

### Abstract

**Back Ground& Objective:** Chronic musculoskeletal pain conditions are a major burden on individuals, health systems, and social care systems, with indirect costs being predominant. This burden has been recognized by the United Nations and WHO, by endorsing the Bone and Joint Decade 2000–2010. The four major musculoskeletal conditions: Gout arthritis, rheumatoid arthritis and low back pain. Rheumatoid arthritis, which is characterized by loss of joint cartilage that leads to pain and loss of function primarily in the knees and hips, affects 9.6% of men and 18% of women aged >60 years. Increases in life expectancy and ageing populations are expected to make Rheumatoid arthritis the fourth leading cause of disability by the year 2020. Objective of this trial was to assess chronic musculoskeletal pain management in elderly patient at Patna Medical College & Hospital.

**Methodology:** A cross sectional study involving patient chart review was conducted to assess chronic musculoskeletal pain management in Patna Medical College & Hospital from May 1, 2018 to July 30, 2018.

**Result:** From a total of 131 chronic musculoskeletal pain management in elderly patient those registered at Patna Medical College Hospital from May 1, 2018 to Jul 30, 2018, of these 82(62.6%) were male and 49(37.4%) were female. This study shows that male were more affected with chronic musculoskeletal pain 82(62.6%) than female 49(37.4%) among this with gout arthritis 26(86.6%) were male and 4(13.3%) were female, Rheumatoid arthritis 46(58.9%) were male and 32(41.1%) were female whereas with low back pain 10(43.5%) were male and 13(56.5%) were female.

**Conclusion:** This study shows, from chronic musculoskeletal pain, Rheumatoid arthritis was more prevalent 78(59.5%) when compared with other type of chronic musculoskeletal pain in elderly while, low back pain is the least 10(43.5%) and gout arthritis 30(22.90%) have moderate prevalence and chronic musculoskeletal pain was more prevalent in male elderly patient 82 (62.6%) when compared with female elderly patient 49(37.4%) as indicated from patient chart which were recorded from May 1, 2018 to Jul 30, 2018 at Patna Medical College & Hospital. Since treating elderly patient need great precaution regarding drug metabolism and excretion so prior to prescribing NSAID, Steroid and other anti-pain to treat Chronic MSK pain management in elderly, pertinent lab finding such as Liver function test, Renal function test are essential.

**Keywords:** Pain Management, Chronic Musculoskeletal, Elderly Patients Rheumatoid arthritis.

## Introduction

Chronic musculoskeletal pain conditions are a major burden on individuals, health systems, and social care systems, with indirect costs being predominant. This burden has been recognized by the United Nations and WHO, by endorsing the Bone and Joint Decade 2000– 2010. The four major musculoskeletal conditions: Goutarthritis, rheumatoid arthritis and low back pain. Rheumatoid arthritis, which is characterized by loss of joint cartilage that leads to pain and loss of function primarily in the knees and hips, affects 9.6% of men and 18% of women aged >60 years. Increases in life expectancy and ageing populations are expected to make Rheumatoid arthritis the fourth leading cause of disability by the year 2020.<sup>[1,2,3,4]</sup> In case of chronic non-cancer pain (involves musculoskeletal condition such as arthritis) has been described as a “disease” concept rather than series of symptoms. The use of oral medication in the treatment of chronic musculoskeletal pain in the elderly requires careful selection of drugs to control pain with consideration for both the physiological state and the presence of disease(s). Recent advances have improved the understanding of bimolecular mechanisms of chronic pain. These include the production of powerful proinflammatory cytokines by glial and microglia cells, which then lead to activation of major pain pathways from the periphery through the dorsal horn and supraspinal pathways to the somatosensory and other higher cortical centers. This has allowed better recognition for intervention with anti-inflammatory agents to control cytokine production (e. g. prednisolone, triamcinolone and other brain-penetrating corticosteroids). Advances in understanding of chronic pain have led to recognition of neuronal P2X2 purinergic receptors as potential sites for drugs to control pain by more selective actions. Cardio-renal effects have been attributed to some anti pain (e. g. diclofenac), but not all (e. g. naproxen) conventional NSAIDs. Here we make recommendations for a selection of certain NSAIDs to be used for pain therapy in the

elderly in consideration of their relative safety and pharmacokinetics. While newer formulations of narcotics have given some advance in pain control, the application of this group of drugs requires close supervision in the elderly, especially those with cognitive decline, since drug actions on the central and peripheral nervous systems can result in significant adverse effects of these agents (e. g. constipation, drowsiness, respiratory and cardiovascular decline).<sup>[5,6,7,8]</sup>

Musculoskeletal (MSK) pain is one of the leading causes of chronic health problems in people over 65 years of age. Studies suggest that a high prevalence of older adults suffer from MSK pain (65% to 80%).<sup>[12]</sup> The prevalence of pain in the elderly is not accurately known, some studies suggest that older adults have an even higher prevalence of MSK pain, between 65%–85% with 36% to 70% reportedly suffer from a back pain, Rheumatoid arthritis and gout arthritis condition.<sup>[13,14]</sup>

Authors evaluated quality indicators for chronic pain in a random sample of 372 older community dwelling patients using medical record review and interviews. They concluded that chronic pain management in older vulnerable patients is inadequate and that improvement is needed in screening, clinical evaluation, follow up and attention to potential toxicities of therapy.<sup>[15]</sup>

As my knowledge currently there was no adequate study that was done on assessment of chronic musculoskeletal pain management in elderly patient in Patna so that this study will help for members of Patna Medical College & Hospital to know the magnitude and prevalence of the chronic musculoskeletal pain in elderly patient. Despite the essential role of ant pain in reducing chronic musculoskeletal pain, it remains cause of complication and permanent physical disability in elderly people. Preventing elders from developing chronic musculoskeletal pain in the first place is critical to reducing its physical disability. But once an elder develops chronic musculoskeletal pain a care giver must recognize the symptom and seek appropriate management.

## Methodology

This study was conducted in Patna Medical College and Hospital. The source of population of the study was all elderly patients of Patna Medical College & Hospital with chronic musculoskeletal pain disorder from May 1, 2018 to July 30- 2018.

The main Inclusion criteria was all patient  $>65$  years old those registered for management of chronic musculoskeletal pain. Those who were registered between May 1, 2018 to July 30- 2018. The major exclusion criteria were All patient those age was  $<65$  years old, those patients who were admitted in inpatient ward at the time of data collection, those patient who were with chronic musculoskeletal malignant pain and those patients with post-operative pain.

Data was collected by a nurses through retrospective by using semi structured questionnaires among elderly patients' chart those above 65 years old who were registered for management of chronic musculoskeletal pain in outpatient department in PMCH from May 1, 2018 to July 30- 2018. The clarity and completeness check-up of collected data was undertaken after the actual data collection and data clearing was conducted.

## Result

From a total of 131 chronic musculoskeletal pain management in elderly patient those registered at

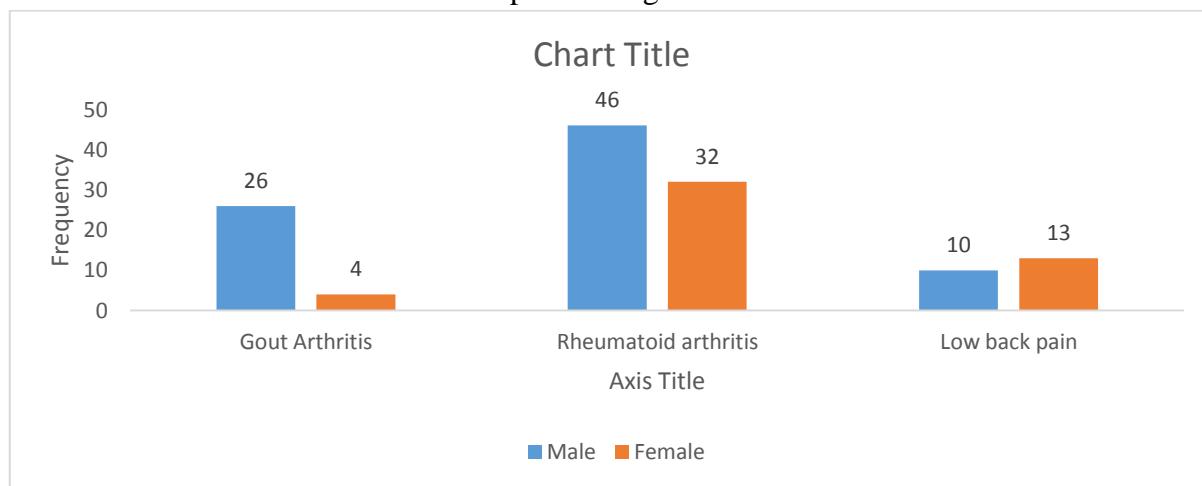
Patna Medical College & Hospital from May 1, 2018 to July 30, 2018, of these 82(62.6%) were male and 49(37.4%) were female. This study shows that male were more affected with chronic musculoskeletal pain 82(62.6%) than female 49(37.4%) among this with gout arthritis 26(86.6%) were male and 4(13.3%) were female, Rheumatoid arthritis 46(58.9%) were male and 32(41.1%) were female whereas with low back pain 10(43.5%) were male and 13(56.5%) were female.

**Table 1:** Socio-demographic characteristics of chronic musculoskeletal pain management

Characteristics	Frequency	Percent
Sex	Male	82
	Female	49
Age group	65-75	98
	76-85	24
	$\geq 86$	9

Among 131 with chronic musculoskeletal pain the most prevalent was Rheumatoid arthritis 78(59.5%), gout arthritis 30(22.90%) have moderate prevalence and low back pain 23 (17.6%) was the least prevalent. Rheumatoid arthritis 46(58.9%) were male and 32(41.1%) were female whereas with low back pain 10(43.5%) were male and 13(56.5%) were female. (Figure 1)

**Fig. 1:** Prevalence of chronic musculoskeletal pain management

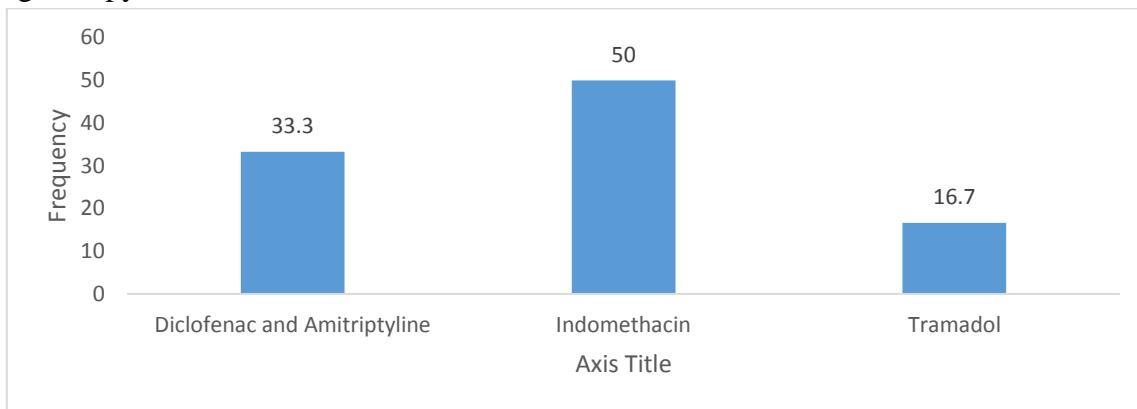


Among 131 patient 30(22.90%) have gout arthritis, of these 10(33.3%) were treated with diclofenac IM minimum of 03 days and maximum of 05 days

and Amitriptyline for 2 weeks duration of treatment, 15(50%) were treated by Indomethacin for 14 days duration of treatment and 5(16.7%)

were treated with Tramadol IM for 5 days and prednisolone by tapering dose for minimum of 10 days and maximum of 15 days duration of treatment. (Figure 2)

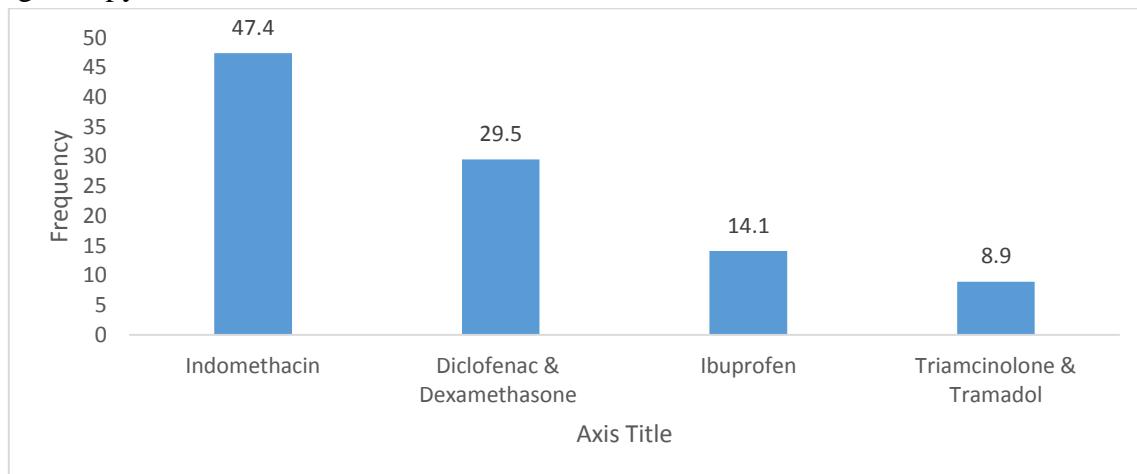
**Fig 2:** Drug therapy for Gout arthritis



Out of 131 registered patients 78(59.5%) have Rheumatoid arthritis, of these 37(47.4%) were treated with Indomethacin suppositories and po for 10 days and 14 days duration of treatment respectively, 23(29.5%) were treated with Diclofenac IM and Dexamethasone IM concomitantly for minimum of 05 days and

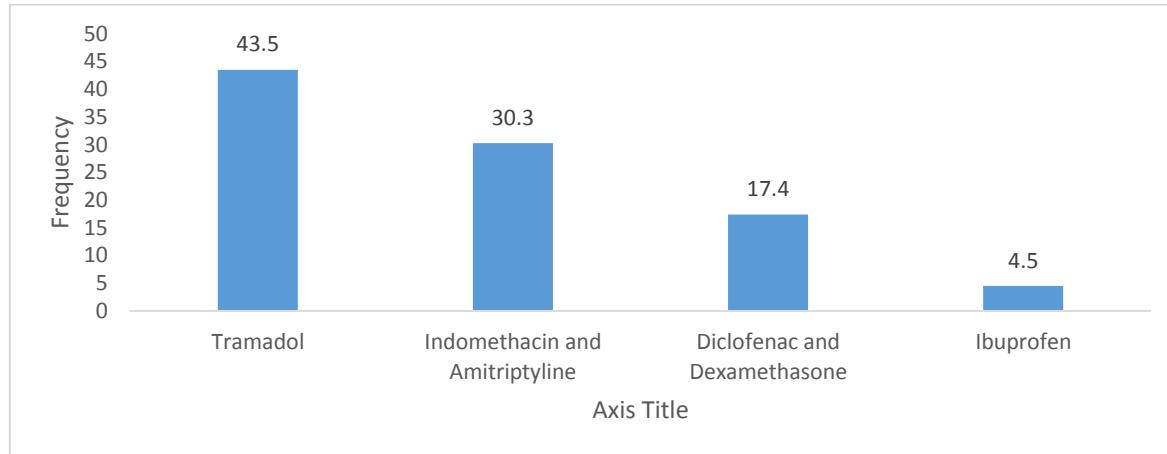
maximum of 07 days duration of treatment, 11(14.1%) were treated with Ibuprofen po for minimum of 10 days duration of treatment and maximum of 10 days duration of treatment and 7(8.9%) were treated with Triamcinolone IM stat and Tramadol po for 05 days total duration of treatment. (Figure 3)

**Fig 3:** Drug therapy for Rheumatoid arthritis



Among 131 patients 23(17.5%) have low back pain, of these 10(43.5%) were treated with Tramadol for minimum of 05 days and maximum of 10 days total duration of treatment, 7(30.3%) were treated by Indomethacin for 10-14 days plus Amitriptyline for 2 weeks total

duration of treatment, 4(17.4%) were treated with Diclofenac IM plus Dexamethasone IM for 05 days and 2(8.7%) were treated with Ibuprofen for minimum of 05 days and maximum of 10 days total duration of treatment. (Figure 4)

**Fig. 4:** Drug therapy for low back pain

## Discussion

As American Geriatrics Study Panel shows, the incidence and prevalence of chronic musculoskeletal pain generally rise with increasing age and higher among women.<sup>[16]</sup> But the study conducted in Patna Medical College and Hospital from May 1,2018-July 30,2018, shows that the prevalence of chronic musculoskeletal pain in elderly was higher among men 82(62.6%) when compared with women 49(37.4%). In this assessment patient with gouty arthritis were treated by Diclofenac, Amitriptyline, indomethacin, Tramadol and prednisolone as follow. From a total of 131 patient 30(22.90%) have gout arthritis, of these 10(33.3%) were treated with diclofenac IM minimum of 03 days and maximum of 05 days and amitriptyline po for 2weeks duration of treatment, 15(50%) were treated by Indomethacin po for 14days duration of treatment and 5(16.7%) were treated with Tramadol IM for 5 days and prednisolone po by tapering dose for minimum of 10 days and maximum of 15 days duration of treatment.

As study conducted by Joint Committee of the Medical Research Council of Australia suggested, patients treated with methotrexate have the highest rate of continued long-term therapy, and therefore most rheumatologists consider it the drug of choice. Disease-modifying drugs were effective as combination therapy for rheumatoid arthritis and whether the combinations studied had better efficacy than methotrexate alone. Conventional

therapy for rheumatoid arthritis includes the administration of anti-inflammatory drugs, followed by disease-modifying ant rheumatic drugs such as methotrexate, hydroxychloroquine, sulfasalazine, and gold in patients with persistent active disease.<sup>[22]</sup>

## Conclusion

This study shows, from chronic musculoskeletal pain, Rheumatoid arthritis was more prevalent<sup>[78] (59.5%)</sup> when compared with other type of chronic musculoskeletal pain in elderly while, low back pain is the least<sup>[10](43.5%)</sup> and gout arthritis 30 (22.90%) have moderate prevalence and chronic musculoskeletal pain was more prevalent in male elderly patient 82 (62.6%) when compared with female elderly patient 49(37.4%) as indicated from patient chart which were recorded from May 1,2018 to Jul 30,2018 at Patna Medical College & Hospital. Since treating elderly patient need great precaution regarding drug metabolism and excretion so prior to prescribing NSAID, Steroid and other anti-pain to treat Chronic MSK pain management in elderly, pertinent lab finding such as Liver function test, Renal function test are essential.

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