



Research Article

CLINICO EPIDEMIOLOGICAL PROFILE OF PATIENTS ATTENDING THE PAIN CLINIC OF A TERTIARY CARE TEACHING HOSPITAL IN SOUTH INDIA-A DESCRIPTIVE STUDY

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ABSTRACT

The state of Kerala, India boasts a well-developed and wide spread development in palliative care, but regarding the very idea of a free standing pain clinic is still in infancy, even at this most educated and health oriented state of India. This retrospective study looked in to the patient load and their profile, who visited its outpatient clinic.

We observed that majority of attendees were females (66.3%), literate (95%), married (95%), and the sufferers belonged to the most active age groups of the community ie, between 20 to 40 years (74.54 %). Among the painful conditions low back pain and lower limb pains constituted the major group, (23.97% each).

Such a study, not only provided an insight to pattern of cases but also gave a cross section of pain sufferers of the community and their orientation, helping to prepare and plan in future. We believe that while preparing to treat a wider spectrum of diseases and age groups not only enhances the role of multimodal approach to pain relief but also substantiate its relevance as an independent speciality.

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INTRODUCTION

After world health organization recognised “pain” as the fifth vital sign, there has been considerable focus of interest on pain of patients. Dr Rovenstine, an Anaesthesiologist set up the first pain clinic in 1936 in Newyork.¹ The first multi-disciplinary pain clinic was established in 1940 in Seattle.²“Pain clinics” started to have independent existence, world wide and its growth touched India too since last two decades. Teaching institutes like ours were entrusted with the duties of establishing and maintaining pain clinic in the community .many times the profile of patients attending such a stand alone pain clinic can be surprising and unanticipated, both in terms of number of patients and spectrum of diseases.

We plan a cross sectional evaluation of the records for a retrospection in to the clinico-epidemiological spectrum of patients sought treatment under the pain clinic since its inception in February 2015, with the belief that such an insight facilitate us to prepare, plan and execute better patient care in future, since chronic pain with a point prevalence of 13% is one of the most common symptom for which a patient visit primary health care physician³

MATERIALS AND METHODS

After approval from the institutional research committee and ethical committee, the details of patients attended the Pain clinic of Department of Anaesthesiology, Government Medical College, Thrissur, Kerala, India in last three years were entered in the Microsoft excel for demographic details, age, gender, disease and then statistically analysed using Microsoft excel of windows 10. The relative proportion of painful conditions for which the patients visited pain clinic and their epidemiological profile in terms of gender, age and educational and marital status were analysed. The Patients whose disease details cannot be traced out from the register or those with incomplete data were excluded.

RESULTS

The following results were obtained on analysis. demographical data of the patients were evaluated based on the gender, education and marital status of the patients. There were a total of 2616 patients attended the pain clinic during the study period, who had the following profile

Gender wise classification

Of the 2616 patients, 66.3% (1655) were females, making the majority of the pain clinic attendees

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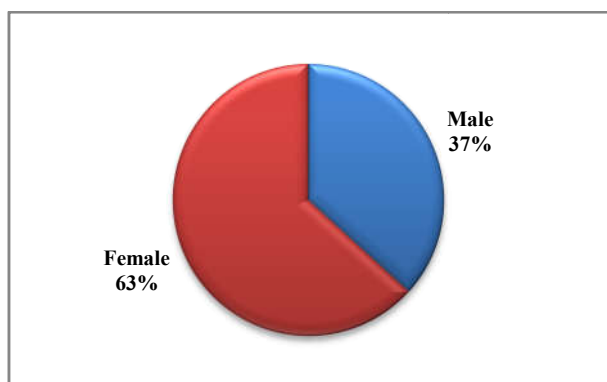


Figure 1 Gender wise distribution

Educational status

It was observed that among the attendees, majority ie, 1434 (54.8%) patients had education to college level, while 1052 (40.2%) were literate to have education to school level. There were only 130 patients who were illiterate.

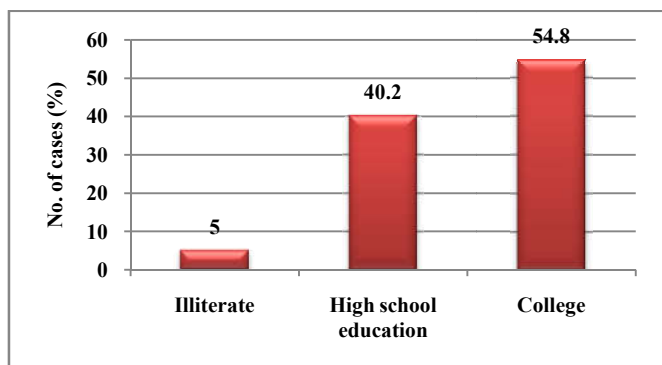


Figure 2 Educational status

Marital status

Among the patients 95% (2486) were married, while unmarried were only 130.

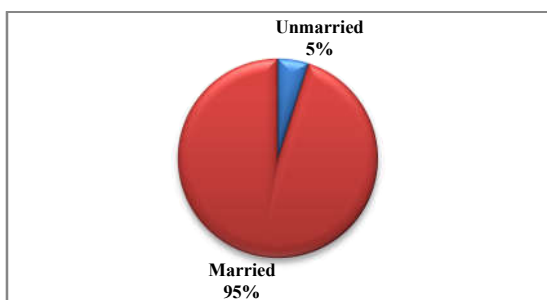


Figure 3 Marital status

Age wise classification

We classified the pain clinic attendees, in to the following age grid (table 1) to observe the percentage frequencies. it was observed that majority of the patients attended were from the most productive age groups of the community i.e., between 20 to 40 years constituting 1950 (74.54 %)

Table 1

Age	Frequency	Per cent
0-20	60	2.3
21-40	600	22.9
41-60	1350	51.6
61-80	500	19.1
>80	106	4.1
Total	2616	100

Disease Type

The following, table 2 and figure 4 were the actual number and relative proportion of various diseases contributed to the total number of 2616 patients.

Table 2

Disease	Frequency	Per cent
LBA	627	23.97
Lower Limb Pain	627	23.97
Neuropathic Pain	227	8.68
Cancer Pain	61	2.33
Head And Neck Pain	181	6.92
Abdominal Pain	130	4.97
Upper Limb Pain	243	9.29
Others	520	19.88
TOTAL	2616	100

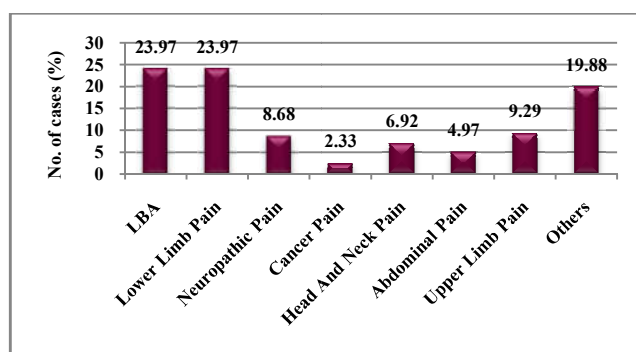


Figure 4 Types of Painful Conditions And Relative Proportion

The various painful conditions, for which the patient attended pain clinic, low back pain and lower limb pain constituted the major group,(23.97% each). The third major group(19.88%) is constituted by various conditions like generalized body ache, post surgical pain and chronic pain in the elderly. The other groups and their proportionate contributions are as shown in the figure 4.

DISCUSSION

The field of acute pain medicine is still in its infancy in most developing countries and literature search discusses, the barriers that come in the way of implementing pain services. However, there are very few studies in the Indian setups regarding this. In a national survey, Jain *et al.*, observed that there are 68 functioning APS centres in our country, out of which only 3 have a dedicated pain team at night, 20 have no training programs, and 34 have no written protocols. Of these, 45 APS units are managed by anaesthesiologists and rest by surgeons and nurses. In addition, in the majority of these centres, pain is not routinely measured/documentd. Therefore, the quality of services provided by these units is also questionable.⁴

Eighty percent of physician visits are prompted by complaints of pain⁵. They may be in acute or in chronic pain. Although acute pain is most often taken care by the staff, the chronic painful conditions, with a broad spectrum of chronic non cancer pains to cancer pains propose a challenge to the treatment team. It was observed, 10- 55% of Western societies suffer from chronic non cancer pain ⁶. The data from Indian population is expected to be dismal than their western counterparts.

In our study, of the 2616 patients, 66.3% (1655) were females, making the majority of the pain clinic attendees, this is in

accordance with the findings that the overall prevalence of LBP, many chronic pain conditions, musculoskeletal pains are higher in females. This can be attributed to increased pain sensitivity, Menstrual cycle fluctuations, response to pregnancy and childbearing, physical stress of child-rearing, perimenopausal abdominal weight gain etc.⁷⁻¹⁰

It was observed that among the attendees, majority ie, 1434 (54.8%) patients had education to college level, while 1052 (40.2%) were literate to have education to school level. There were only 130 patients who were illiterate. This may be in contrast to the literature, where the higher pain clinic visits were observed in lower educational status¹¹. This deviation can be explained due to the higher level of awareness in a cent percent literate state, where this observational study was performed. Our study also observed an increased incidence of pain clinic attendees in married ie, 95% (2486), while unmarried were only 130. Married individuals seem to have more involvement in the house hold chaos leading to aggravated stress and strain and thus more pain.

It was observed that majority of the patients attended were from the most productive age groups of the community ie, between 20 to 40 years constituting 1950 (74.54 %) patients in our study. Population-based studies have shown that the prevalence of widespread pain increases with age, peaking in the seventh and eighth decades.¹²

The various painful conditions, for which the patient attended pain clinic, low back pain and lower limb pain constituted the major group,(23.97% each). The third major group (19.88%) is constituted by various conditions like generalized body ache, post-surgical pain and chronic pain in the elderly. A major study from Southern India delineates various causes and age related risk factors among back pain sufferers. They observed 28.4% of men studied and 52.9% of females having low back pain with highest prevalence in the fourth decade to almost 50% and there was a statistically significant increase in low back pain among woman. Sterilization and caesarean section were found to be positive predictors¹¹. A systemic review suggested gradual peaking and attaining a plateau by age of 65 followed by a decline in prevalence of low back pain. Prevalence of LBA is found to be related to ethnicity, as highlighted 2.4 times increased prevalence among Indians in Singapore, among nationals of varied ethnicity and also with those with lower education and thus poor socio economic status.¹³

Lower limb pain

Among the lower limb groups osteoarthritis, plantar fasciitis contributes to the major patient complaints. Arthritis specifically osteo arthritis have shown a significant increase by 75% from 1990 to 2013 with an increased trajectory. It has been observed that low to middle income countries (LMIC) have compromised educational status, thus poor socio economic position, higher physical activity and thus increased bone and joint diseases. The same study observed divorced, Widowed or separated with greater work load (which cannot shared with a partner) have increased prevalence of musculoskeletal diseases and thus arthritis. It is also speculated in LMICs pain management is not the top priority while WHO reports a 5 to 33% of individuals in these countries experience chronic pain on a daily basis.¹³ Neuropathic pain

Neuropathic pain and radicular pain constitute another major group. Cervical and lumbar radiculopathy originating from a prolapsed inter vertebral disc was significant cause for the radiculopathy. Among the systemic cause Diabetes mellitus, with India emerging as a diabetes capital of the world is the major culprit. Contrary to the popular belief of duration of diabetes and onset of neuropathy it was observed that the relation of duration and diabetic neuropathy is not linear.

With increasing age neuropathies associated with aging is rising. So do those associated with HIV, drug induced (anti-retroviral and chemotherapeutic agent induced) Rheumatoid, vasculitis induced, autoimmune induced, Neuropathies were observed more in females. Post herpetic neuropathy with increasing severity chronicity with age also contributed to the patient load. Nutritional cause for neuropathy was there in this part of world. Mono and polyneuropathies were always under reported in an underdeveloped and developing country as they seldom receives attention in elderly and by the core groups.¹⁴

Cancer

Delayed detection and stigma of the disease adds up the physical and psychological pain of the sufferers. Our pain clinic data do suggest the increase in trend of this major public health concern. A study reported cancers the leading cause of death in India with about 25 million patients and a proposed fivefold increase by 2025. Every hour more than 60 patients die in India from cancer and pain. The same study projects an increase in trend in cancer in India with more female sufferers is in accordance with or own observation. Our proportion of cancer pain may not be the actual pain proportion of pain in the state as there are well established palliative centres in and out of the hospital and our clinic looked in to the interventional aspects of pain therapy only while drug therapy is done elsewhere, In view of the increased incidence of malignancy in India and around the globe attributed to aging infections and exposure to carcinogen. In under developed and developing countries (7%death in India) this surge is tremendous with regard to female breast, lung and colorectal cancers¹⁵.

Head and neck pain

There has been ample studies associating age and neck pain incidence, most concludes that the relation is equivocal. However the common observation is a peak in the middle age and with a better prognosis associated with early onset of illness.¹⁶⁻¹⁷ A recent study observed global migraine prevalence as 11.6 %; Africa 10.4% and Asia 10.1% with higher prevalence in females and urban population with an increase in trend over years. Although we specifically didn't look in to migraine incidence, the trend appears similar in our group also.¹⁸

Abdominal Pain

Patients visiting OPD with chronic abdominal pain expressed variety of causes which extend to organic to functional disorders. Chronic pancreatitis was a major cause of abdominal pain in this part of the world with a definitive male predominance. This can be attributed to chronic alcoholism, smoking and poor socio economic status and a definite male predominance. Pain due to intra-abdominal adhesions following previous surgery, parietal wall pain, peptic ulcer, functional dyspepsia, and functional abdominal pain syndrome were also encountered although in small numbers.¹⁹

Upper Extremity Pain

Among the upper extremity pains, adhesive capsulitis, chronic arm pain, strained muscles, tennis elbow, carpal tunnel syndrome, diffuse repetitive strain injury are the common conditions seen in our outpatient clinic. It was noted that upper limb pain were more associated with work, postures, as well as in elderly females committed to perform all house hold chaos. About 20% of adult population in community experience shoulder pain in their life time with increasing incidence.²⁰ Our clinic also shows an increasing trend towards this aspect. Other conditions encountered, although in small proportions, left with significant morbidity were bicipital tendinitis, brachial plexus injury and CRPs.

There is a wide spectrum of patients attended our outpatient clinic with rarer and nonspecific pain. It was observed that patients with nonspecific pain often complained migratory pain and with significant affective complaints. Many of them were on mood elevator medication or antidepressants. From other outpatient departments, chronic non healing systemic illness like fibromyalgia chronic fatigue syndrome, vitamin D deficiency, anaemia, connective tissue disorder and post stroke patients fall in this group. Patients with sequelae of viral infection also contributed to this group. Work place stress isolation in family, and economic concerns were commonly associated. Most of them have disturbed sleep pattern and psychiatric medication.

Limitation

With a varied geography, ethnic, cultural and social background of a subcontinent like India a cross sectional study, although from a tertiary care hospital, may not represent the status of the entire nation. A multicentric trial is mandatory to provide some more light to the patient profile of the patients attending the pain clinic of the nation.

CONCLUSION

Patients with chronic pain are treated in a variety of settings including primary care, specialty hospital clinics, and dedicated pain clinics and even by other systems of medicine. While addressing chronic pain, those patients seen in specialty pain clinics have higher functional impairment and psychosocial difficulties and their threshold for physician visit and treatment expectations vary greatly than those who visited a primary care physician.

The high prevalence of unsatisfied chronic pain sufferers in the population, lack of awareness, appropriate training of primary care physicians in chronic pain management and paucity of consultation services in the field of pain medicine demands the presence of a dedicated pain clinic, independent of its work and existence in every developed society. Our study, from such a dedicated clinic, first of its kind in the region provide a cross sectional profile of the beneficiaries. It was also observed that an ethnic, racial, cultural, demographic factors and inter individual differences influence pain perception and response to therapy.

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