



RESEARCH ARTICLE

FREQUENCY OF CHRONIC LOW BACK PAIN AND ITS MANAGEMENT APPROACH; A CROSS SECTIONAL SURVEY OF DOCTORS ACROSS PAKISTAN

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ABSTRACT

Objective: This survey intends to know the frequency of chronic low back pain and the line of management used by the doctors for managing chronic low back pain.

Methods: This was a descriptive and cross sectional study with non-probability convenient sampling. This survey was carried out at different centers across Pakistan from May to July 2016. Inclusion criteria were the doctors who have potential to see more patients of low back pain including general physicians, orthopedician and neurologists. Incomplete Performa were excluded. SPSS version 20.0 was used for data analysis.

Results: A significant number of low back pain were presented in this cohort of doctors. First priority in treatment of Chronic Low back pain considered was efficacy 147 (73.5%) of drug. Remaining 17% considered combination of patient compliance, rapid mode of action and efficacy as priority. Most common reason for discontinuation of pain medicine was gastrointestinal disturbance with all different toxicity. First line drug for managing Low back pain in adult was diclofenac sodium and potassium (109 responses) and second choice of drug was gabapentin (91 responses). First line of treatment of refractory cases was combination therapy and neuroanalgesic notably gabapentin.

Conclusion: The frequency of chronic low back pain presenting to the selected cohort is much higher in this survey. Gabapentin is used as the first line therapy for refractory cases of chronic low back pain. Gabapentin is also found Superior than many other drugs in terms of efficacy. It also carries least side effects.

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INTRODUCTION

A well predictable and exceedingly communal health problem is low back pain but its load is often considered trivial. It creates huge economic burden on individuals, families, communities, industries and government and is the leading cause of absence of individual and work inadequacy throughout much of the world. It was largely thought as a problem confined to the western countries ten years ago, but the rising amount of exploration has established that it is a most important problem in middle and low economic countries

as well. (Hoy et al., 2010) It is predicted that 84 % of the adults suffer from low back pain in their lives at certain point which are usually self-limiting. The back pain is classified according to its duration of pain; within 4 weeks, between 4 to 12 weeks and more than 12 weeks as acute, sub-acute and chronic back pain respectively which may rarely be the sign of severe ailment. (Wheeler et al., 2016) It is estimated that 5 to 10 % of cases will develop chronic low back pain which is the focal cause for the people to pursue therapeutic advice. Chronic low back pain has also burdened individually and health care system with high management cost, individual suffering and sick leaves. (Meucci et al., 2015) Chronic low back pain is diagnosed on the basis of history, physical examination supported by radiological examination and other tests. (Hayashi, 2004) A chronic low back pain disturbs the individual's functioning ability and its severity affects the

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regular activities as well. (Carita *et al.*, 2012) Several treatment alternatives are accessible for the low back pain. (Chou *et al.*, 2009) Its symptoms are usually relieved by the short term use of anti-inflammatory and pain medication. (Malanga and Dunn, 2010) The aim of treating low back pain is frequently adjusted over time, from improving pain to cure and restore the functional loss although the patients have impractical belief for the complete remedy and full return to their previous level of activity. Supporting the expectations and revisiting them on follow-ups may be helpful for reducing the breach between the patient's desired amount of pain reduction and the lowest proportion of improvement that would make a treatment valuable. (Allen and Hulbert, 2009) There are three kinds of approaches to manage low back pain including monotherapy, multidisciplinary therapy and reductionism. The treatment which a medical practitioner might recommend as a single administration is monotherapy. The group of exercises, education and behavioral therapy is multidisciplinary therapy and the application of the target specific treatment with the assistance of pathoanatomical diagnosis for chronic low back pain involves reductionism. This study intends to know the frequency of chronic low back pain, the line of management used by the doctors, to increase the use of evidence-informed conservative approaches to the treatment in health care centers, to promote appropriate specialist referrals and the practice of alternate therapy for the refractory cases. Usually at good health center, the drug therapy is always supported by life style management, exercises and physiotherapy. Pharmacological therapy can range from a single anti-inflammatory drug to a combination therapy comprising of ant-inflammatory, neuroleptics and muscle relaxants.

MATERIALS AND METHODS

This was a descriptive and cross sectional study with non-probability convenient sampling. This research was carried out at different centers (Hospitals/clinics) across Pakistan from May to July 2016. Inclusion criteria were the doctors who have potential to see more patients of low back pain including general physicians, orthopedicians and neurologists. Incomplete performas were excluded. SPSS version 20.0 was used for data analysis. We involved doctors from large group practices all over the Pakistan. This supported us to discover the extensive range of experiences. Two hundred and thirty (230) doctors across whole of the country including all four of the provinces were targeted from a well-designed performas. Thirty performas were excluded due to incomplete filling. Two hundred completed performas were included for analysis. They were asked regarding the rates of adults presenting with low back pain as out patients and the criteria for selecting mode of the prescription to the patients and the medication with first and second choice in chronic low back pain and in refractory cases. The drug of choice as first line for managing chronic low back pain in adult patient was assessed. SPSS version 20.0 was used for data analysis. The data was presented as frequencies and percentages.

RESULTS

A total of 200 doctors were targeted in which most 133 (66.5%) were found with the qualification of MBBS only and others 67 (33.5%) were having specialty in the field of orthopedics, neurology and internal medicine. When asking about their specialty 116 (58%) were belonging to the medicine whereas 63 (31.5%) were found to be from

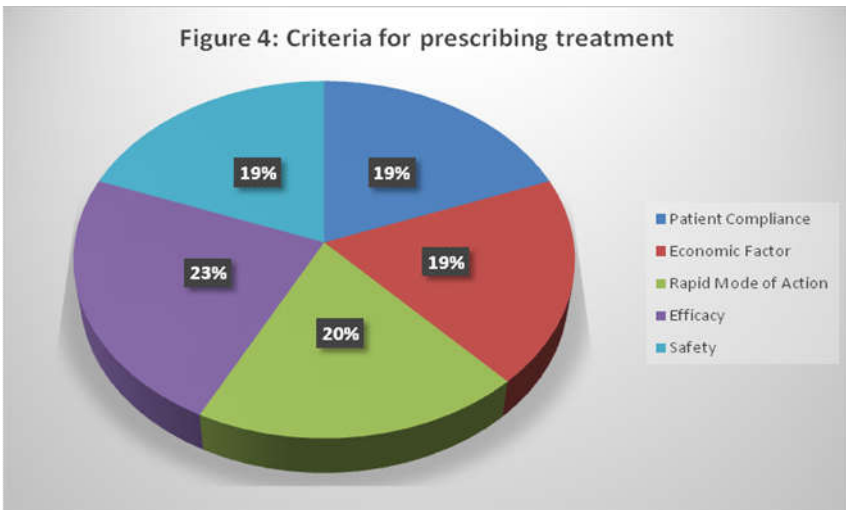
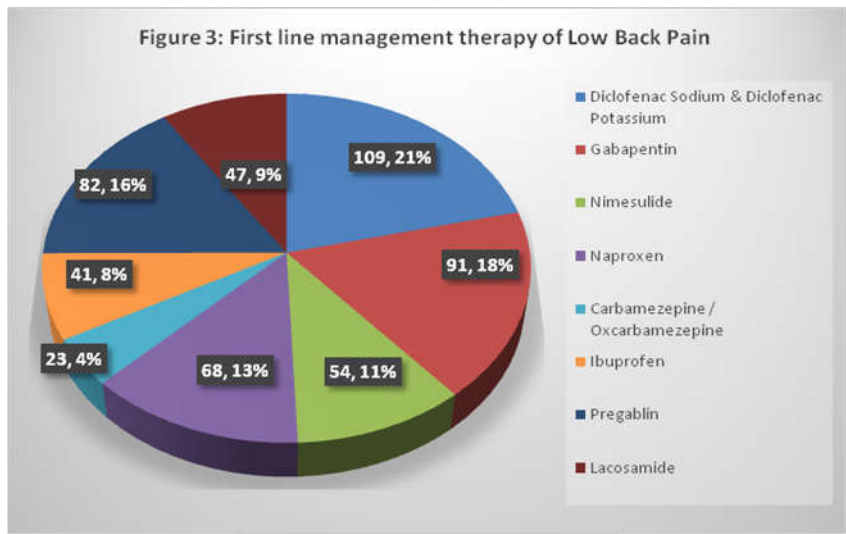
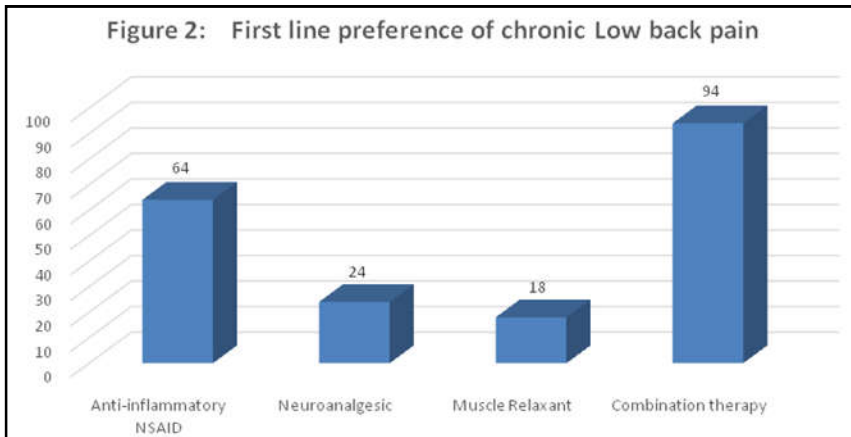
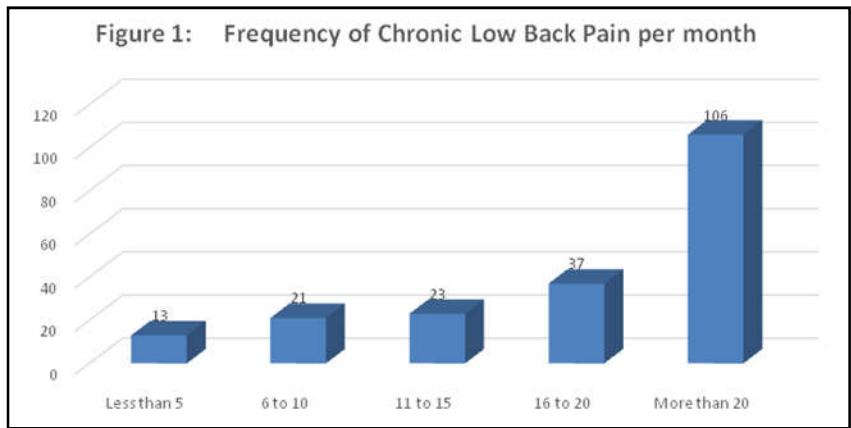
orthopedics department. The General Practitioners, Resident medical officers and Post-graduate were found in equal percentages. Mostly 134 (67%) doctors treating their patients at Hospital OPD. (Table 1) Out of 200 doctors 106 (53%) use to manage more than 20 patients in a month (Figure 1). It was seen that 94 (47%) doctors prefer combination therapy as first preference and anti-inflammatory 64 (32%) as second line in low back pain. (Figure 2) In refractory cases, mostly doctors 92 (46%) manage low back pain by combination therapy including anti-inflammatory, neuroanalgesics and muscle relaxants. Neuroanalgesic like gabapentin was used as a sole agent as a second choice in 53 (26%). For the management of pain. Mostly 34 (17%) doctors prescribed combination therapy. (Table 2) Gastrointestinal disturbance came out to be the commonest (35%) reason for the discontinuation of pain medicine (Figure 5). First line drug for managing Low back pain in adult was diclofenac sodium and potassium, 109 (21%) and second choice of drug was gabapentin 91 (18%). (Figure 3) The common criteria used in treatment of Chronic Low back pain was efficacy 23% (Figure 4) whereas, combination of priorities of treatment in Chronic Low back pain preferably was patient compliance, rapid mode of action, and efficacy.

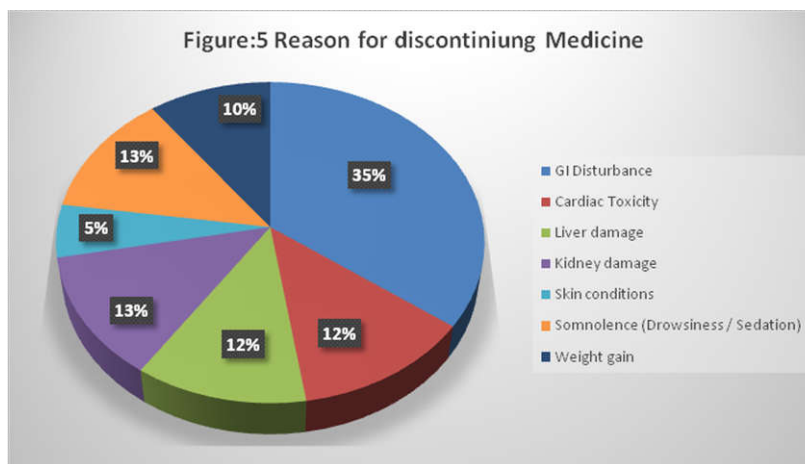
Table 1. Baseline Characteristics

Qualification	Frequency	Percent
MBBS Only	133	66.5
MBBS, FCPS	46	23.0
MS, MRCS	10	5.0
MBBS, MD, MRCP, MCPS	8	4.0
MBBS, DTCD	3	1.5
Place		
Private Clinic	57	28.5
Consulting Chamber	9	4.5
Hospital OPD	134	67.0
Specialty		
Medicine	116	58.0
Orthopedics	63	31.5
General Surgery	9	4.5
Neurology and Neurosurgery	10	5.0
Gynecology and Obstetrics	2	1.0

Table 2. Responses regarding Low Back Pain

Do you see chronic low back pain patients in your OPD?	Frequency	Percent
Yes	199	99.5
No	1	0.5
What would you prefer as first line preference as chronic Low back pain.	Frequency	Percent
Anti-inflammatory NSAID	64	32.0
Neuroanalgesic	24	12.0
Muscle Relaxant	18	9.0
Combination therapy	94	47.0
In refractory cases what would be your choice for 2nd line medical management?	Frequency	Percent
Anti-inflammatory NSAID	28	14.0
Neuroanalgesic	53	26.5
Muscle Relaxant	18	9.0
Combination therapy	92	46.0
Others	9	4.5
In addition to managing pain what other therapy would you prescribe as concomitant medicine?	Frequency	Percent
Neuroanalgesic	30	15.0
Vitamins and Calcium	12	6.0
Muscle relaxant	11	5.5
Proton pump inhibitors	4	2.0
Combination therapy	34	17.0
Nil	30	15.0
Physiotherapy	79	39.5





DISCUSSION

The frequency of low back pain and its management approach by doctors in this survey is being discovered by the qualitative method of this study. The frequency of patients with low back pain is one in a week as demonstrated by most of the primary care physicians in other studies. The acute incidence is usually self-limiting whereas the persistent low back pain for longer than 12 weeks is defined as chronic. These patients are more probable to visit a family physicians (65.0 %) rather than orthopedician (55.9%) for their relieve. (Haldeman and Dagenais, 2008) On the contrary in this survey, frequency of the chronic low back pain in Pakistan is much higher as most of the doctors used to manage at least 6 patients in a week (Figure1). Patients with chronic low back pain are more inclined to go to the general physicians for their treatment (58 %) (Table1) In this study for the refractory cases the doctors use neuroanalgesics; the most common of that is gabapentin and combination therapy comprising of ant-inflammatory, neuroleptics and muscle relaxants. One of the study predicted that the refractory cases of chronic low back pain are improved by the use of Botulinum toxin. A which possesses least side effects and constant favorable response with the uses of second treatment. (Ney *et al.*, 2006) The most common recommendations for the low back pain are the use of medications. (Vogt *et al.*, 2005) In one of the study 80 % of the patients were prescribed by at least one medication at their primary appointment to the general physician and two or more drugs were suggested in one third of the cases. (Romano *et al.*, 2012) The anti-inflammatory drugs (NSAIDS), muscle relaxants and opioid analgesics are the most frequently recommended medications for the chronic low back pain. (Bernstein *et al.*, 2004; Luo *et al.*, 2004) The evidence proposed that the use of antidepressants and anticonvulsants in combination with either opioids, anti-inflammatory drugs or muscle relaxants could be beneficial in the cure of this ailment. (Kaki *et al.*, 2005; Finnerup *et al.*, 2005) A specialized and validated method would be targeting the different mechanisms of pain by combining specific drug agents in spite of the systemic review that low back pain is due to the result of both nociception and neuropathic mechanism which is consistent with our study. (Baron and Binder, 2004) The neuropathic pain has been successfully improved by gabapentin used in combination with other analgesic medications. Gilron *et al.* first described the safety and efficacy of a combination of gabapentin and morphine compared with that of each as a single agent in patients with painful diabetic neuropathy or post herpetic neuralgia. (Gilron *et al.*, 2005) In 41 patients,

gabapentin-morphine combination displayed substantial pain control ($P < 0.05$) versus placebo, gabapentin, and morphine. Romano *et al.* presented that chronic low back pain frequently comprised of both nociceptive and neuropathic components, and various single therapies have been stated to be moderately effective. Thus, a modified combination of multimodal therapy and combining drugs with diverse mechanism of action will signify a balanced approach. (Romano *et al.*, 2012) The assets of this study are that our convenient selection approach has certified that we have sampled the accounts of extensive range of doctors and their proficiencies of treating the patients of chronic low back pain. Furthermore, it delivers wide summaries of the practitioner's perception. However, there are some confounders found in this study such as selection and recall bias. Considering the views of patients and experience and to what extent they are consistent with those of the general physicians would be revealing and beneficial to regulate the misinterpretation of low back pain

CONCLUSION

The frequency of chronic low back pain is much higher in this study. Gabapentin is used as the first line therapy for refractory cases of chronic low back pain. Gabapentin is also found superior than many other drugs in terms of efficacy and carries least side effects. It was seen that diclofenac sodium is found as effective drug in reducing low back pain but its use is limited due to side effects.

REFERENCES

- Allen R, Hulbert K. 2009. Chronic Low Back Pain: Evaluation and Management. *American Family Physician.*, 79(12): 1067-1074.
- Baron R. and A. Binder. 2004. Is sciatica neuropathic? The mixed pain concept. *Orthopade*, 33(5): 568-575.
- Bernstein E, Carey TS, Garrett JM. 2004. The use of muscle relaxant medications in acute low back pain. *Spine*, 29(12): 1346-1351
- Carita K, Katri L, Jouko SJ, Tuominen, Risto. 2012. Perceived relative importance of pain related function among patient with low back pain. *J Rehab Med.*, 44: 158-62.
- Chou R, Loeser JD, Owens DK, Rosenquist RW, Atlas SJ, Baisden J *et al.* 2009. Interventional therapies, surgery, and interdisciplinary rehabilitation for low back pain: an evidence-based clinical practice guideline from the American Pain Society. *Spine*, 34(10): 1066-1077.

- Finnerup NB, Otto M, McQuay HJ, Jensen TS, Sindrup SH. 2005. Algorithm for neuropathic pain treatment: an evidence based proposal. *Pain*, 118(3):289–305.
- Gilron I, Bailey JM, Tu D, Holden RR, Weaver DF, Houlden RL. 2005. Morphine, gabapentin, or their combination for neuropathic pain. *The New England Journal of Medicine*, 352(13): 1324–1334.
- Haldeman S, Dagenais S. 2008. A supermarket approach to the evidence informed management of chronic low back pain. *Spine*, 8(1):1-7.
- Hayashi Y. 2004. Classification, Diagnosis, and Treatment of Low Back Pain. *JMAJ*, May, 47 (5): 227
- Hoy D, Brooks P, Blyth F, Buchbinder R. 2010. The Epidemiology of Low back Pain. *Best Practice & Research Clinical Rheumatology*, 24: 769-781.
- Kaki AM, El-Yaski AZ, Youseif E. 2005. Identifying neuropathic pain among patients with chronic low-back pain: use of the Leeds Assessment of Neuropathic Symptoms and Signs pain scale. *Reg Anesth Pain Med.*, 30(5): 422-8.
- Luo X, Pietrobon R, Curtis LH, Hey LA. 2004. Prescription of non-steroidal anti-inflammatory drugs and muscle relaxants for back pain in the United States. *Spine*, 29(23): E531–E537.
- Malanga GA, Dunn KR. 2010. Low back pain management: approaches to treatment. *J Musculoskel Med.*, 27: 305-15.
- Meucci RD, Fassa AG, Faria NMX. 2015. Prevalence of chronic low back pain: systematic review. *Revisão.*, 49(73): 1-10
- Ney JP, Difazio M, Sichani A, Monacci W, Foster L, Jabbari B. 2006. Treatment of chronic low back pain with successive injections of botulinum toxin over 6 months: A prospective trial of 60 patients. *Clin J Pain*, May; 22(4):363-9.
- Romano CL, Romano D, Lacerenza M. 2012. Antineuropathic and Antioceptive drugs combination in patients with chronic low back pain: A systematic Review, Hindawi Publishing Corporation Pain Research and Treatment. Article ID 154781: 1-8.doi:10.1155/2012/154781.
- Vogt MT, Kwok CK, Cope DK, Osial TA, Culyba M and Starz TW. 2005. Analgesic usage for low back pain: impact on health care costs and service use. *Spine*, 30(9):1075-1081.
- Wheeler G, Wipf E, Staiger O, Deyo R. Evaluation of low back pain in adults. (Last update: April 2016) <http://www.uptodate.com/contents/evaluation-of-low-back-pain-in-adults> (Accessed 22nd August, 2016).
