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Original Research Article

EARLY STAGE OF FIBROMYALGIC PAIN IN ADULTS TREATED WITH GABAPENTIN AT KOSHI ZONAL HOSPITAL

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Abstract

Introduction: Early stage of fibromyalgia (FM) is characterized by generalized body ache, fatigue, restlessness sleep, impaired cognitive and anxiety with unknown etiology. The definite diagnosis and treatment for fibromyalgia are not clear, but medications and alternative treatment can help to alleviate or cure early stage of fibromyalgia, among the medications one is gabapentin.

Objective: Evaluation of Numerical pain rating scale (NPRS) of fibromyalgia by treating with gabapentin at Koshi Zonal Hospital from May 2016 to March 2018.

Methodology : In this cross-sectional study, 50 patients were selected who had already taken more than two times non-steroid anti-inflammatory drugs (NSAIDS) but pain was not relived and those patients were treated with gabapentin(100mg to 300mg) for eight weeks in early stage of fibromyalgia for evaluating pain score in NPRS and complications by using Microsoft Excel Programme.

Results: Out of 50 patients, 39 patients had good response, mean age 25.2 (range18-30 years), 37 female patients, mean female age 25.41 years (range 18-30 years), 13 male patients, mean male age 24.62 years (range 18-30 years), mean duration of illness 5.18 weeks (4-6 weeks).

Conclusion: Patients who were taking gabapentin displayed significant reduction in pain, better sleep, and less fatigue as well as fewer complications.

Keywords: Fibromyalgia, gabapentin, Numerical Pain Rating Scale

Introduction:

Fibromyalgia is a common condition affecting 2-5% of the population, non-inflammatory pain syndrome characterized with widespread musculoskeletal pain, unrefreshing sleep, fatigue (most marked in the morning), tenderness, distress cognitive disturbance especially problems with concentration and memory. Pain is diffuse (shifting dull ache), tingling, burning, throbbing and numbness. (1, 2)

At present, there is no instrumental test or specific diagnostic marker for FM and the characteristic symptoms also overlap with other conditions. There is lack of single unifying pathophysiology and diagnostic test that make difficulty in management of FM. Effective management needs the main elements of pharmacotherapy, integrated treatment, including appropriate patient education, exercise, physical therapy and cognitive-behavioral therapy. Gabapentin is effective and safe in the treatment of pain and other symptoms associated with fibromyalgia. (3, 4, 5)

Methodology:

This cross-sectional study was conducted on 50 patients in the psychiatric outpatient department (OPD) who were referred from orthopedic OPD, Medicine OPD, and Gynecology OPD. All patients were previously treated with NSAIDs, but symptoms did not alleviate. In this study, we selected those patients who had already taken NSAIDS more than two times, the first time they had fibromyalgia and who can follow-up on the proper timetable. We had done some blood investigations to find out if there were any other causes of pain, correlated diseases especially with for rheumatic arthritis, hypothyroidism, and others because the symptoms overlap many other diseases. We also selected adult whose age were 18-30 years old and started gabapentin 100 mg at bedtime after diagnosing fibromyalgia in psychiatric OPD and called for follow-up on 2 weeks interval till 8 weeks. In the second week, all patients gave good responses of treatment without any complications but most of the patients were expecting more responses in such cases we increased dose of gabapentin to 300 mg bedtime in 30 patients. We mainly measured NPRS (0 being labeled as "no pain" and 10 being labeled as "worst pain" imaginable) at each second week, fourth week, sixth week and eight weeks. We also noted and recorded main symptoms and nature of pain before we started gabapentin and tried to find out responses. In our study, we started a low dose of gabapentin and then the dose was increased to 300mg as required in early diagnosed patient and also found out complications during medications. In the first follow up i.e. the second week according to drug response, psychiatrist counseling was given properly to the patients and their family members and was sent to the physiotherapy department for proper exercises.

Results

In our study all patients showed good response except 11 patients, mean age patients 25.2 years (range18-30 years), 37 female patients, mean female age 25.41 years (range 18-30 years), 13 male patients, mean male age 24.62 years (range 18-30 years).

Table 1: Distribution of age, male, female and duration of illness

Mean Age	25.2 years
Mean Age Female	25.41 years
Number of Females	37
Mean Age Male	24.62
Number of Males	13
Duration of Illness	5.18 weeks (4 - 6 weeks)

Table 2: We found mainly these symptoms of FM and natures of pain before started gabapentin, even FM have symptoms and nature of pain.

Symptoms of FM	Female %	Male %	Nature of pain	Female %	Male %
Pain	100	100	Tingling	29.72	23.07
Fatigue	27.02	53.84	Shifting Dull Ache	100	76.92

Sleep disorders	10.8	15.4	Burning	18.91	30.8
Mood disorders	18.91	15.4	Throbbing	16.21	7.69
Anxiety disorders	16.21	30.8	Numb less	8.1	30.8
Cognitive disorders	2.7	15.4	Pricking	5.4	15.4

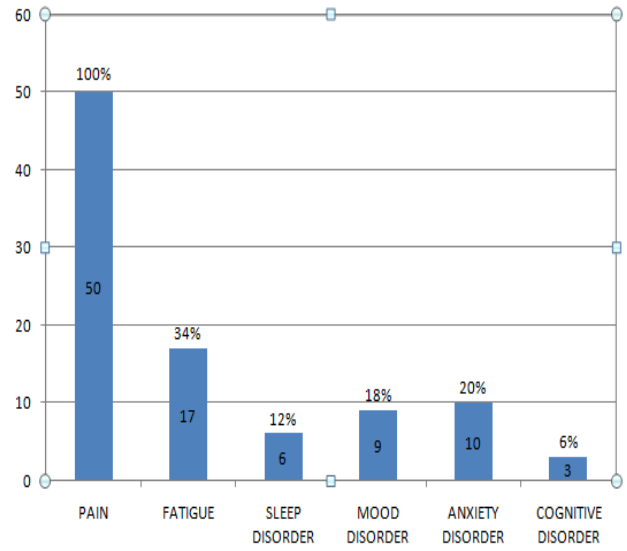


Fig 1 A: Symptoms of FM

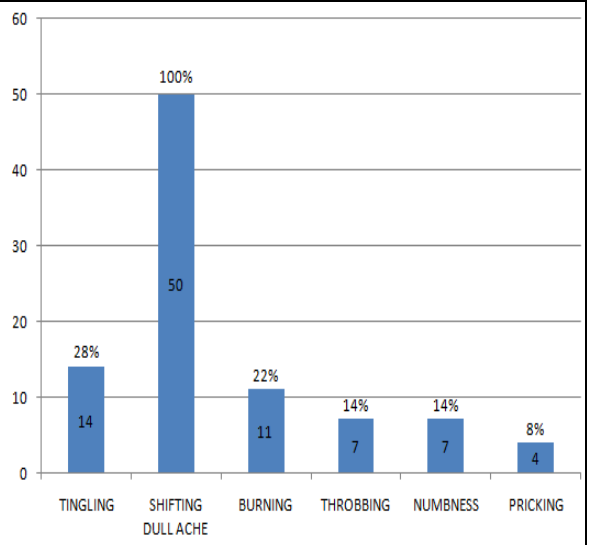
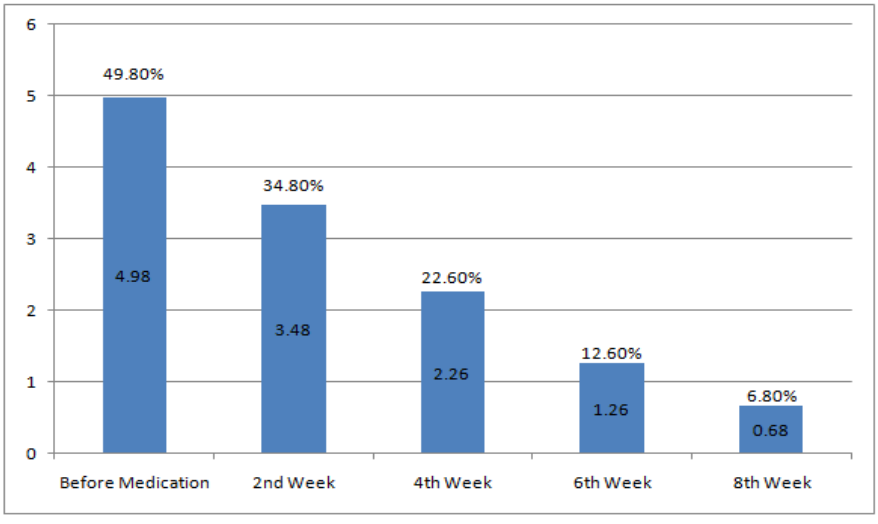


Fig 1 B: Nature of Pain

After medications on second-week patients displayed good response and were even better with the final result in symptoms and nature of pain. In the second week follow-up, 27 patients were added with tablets like multivitamins (e.g. Neurobin Forte) and tablets calcium for maintaining nutritional status.

NPRS (Numerical Pain Rating Scale) showed significantly good responses as per follow up in table 3.

Fig 2: NPRS



The pain was relieved in all patients except 11 patients and those 11 patients were treated with other medications by a psychiatrist.

Table 4: Complications were seen during medications

Headache	10%
Dizziness	12%
Sedation	12%
Nausea	10%
Edema	6%

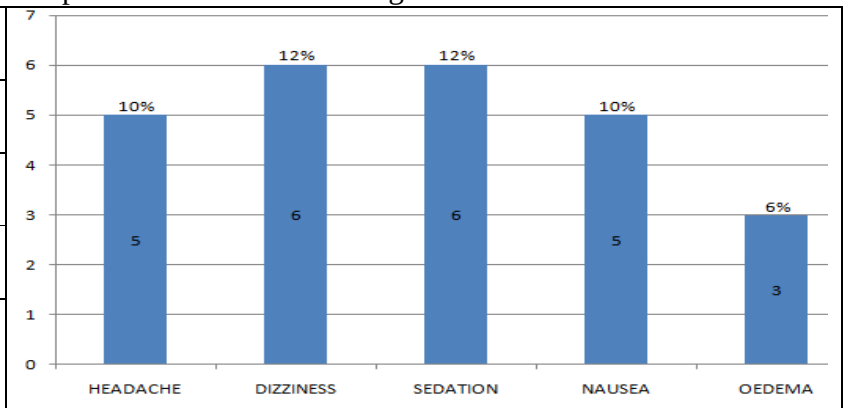


Fig 3: Complication details

Gabapentin has many adverse effects that were found during medication in table 4. There may be another adverse effect that may occur but we did not find out with our prescribed medication such as somnolence, lightheadedness, insomnia, diarrhea, pharyngitis, asthenia, depression, flatulence, nervousness, weight gain, amblyopia, anxiety, cold virus, dry mouth.

Discussion

Fibromyalgia is characterized by widespread pain, fatigue, mood disorders, and cognitive dysfunctions without a well defined underlying organic disease. The pathogenesis and etiology of fibromyalgia are still not clearly understood. Several factors such as impairment of central nervous system, dysfunction of neuroendocrine system and autonomic nervous system, sleep abnormalities, genetic and familial predisposition, abnormality of immune system, psychological factors and stress, peripheral tissues problem, trigger factors e.g. viral infection may be the culprits of FM(6). There is no clear pathophysiology of FM and therefore there is no specific treatment, which results in controversies and challenges. Differential diagnosis includes inflammatory arthritis (IA) and spondylo-arthropathies, autoimmune connective tissue disease, myositis, myopathies, primary generalized osteoarthritis, polymyalgia rheumatica, hypothyroidism and malignancies (7). Chronic pain itself is a disease. Due to lack of specific test and biomarkers, patient's interview and clinical approach based on the patient's complaint of pain and the accompanying symptoms previously mentioned is the best way to its diagnosis(8).

There is no gold standard treatment for FM; henceforth treatment requires a combination of both pharmacological and non-pharmacological options. Nonpharmacological management includes exercise and cognitive behavioral therapy, patient education, complementary and alternative medicine e.g. acupuncture, balneotherapy, chiropractic treatment, and osteopathic manipulative. It is not surprising that there is no single pharmacological agent capable of effectively addressing all of the potential symptoms of fibromyalgia. Pharmacological management of fibromyalgia includes drugs amitriptyline, desipramine, cyclobenzaprine, duloxetine, milnacipran pregabalin, tramadol-acetaminophen. Some study shows duloxetine, milnacipran, and pregabalin were superior in the treatment of fibromyalgia. Gabapentin is similar to pregabalin, but limited studies have been done on its benefits for fibromyalgia. Nonsteroidal anti-inflammatory drugs have demonstrated benefits in combination with

antidepressants (9,10). Exercise can improve negative mood states like depression and anxiety. Short-term exercise and educational programs can produce immediate and sustained benefits for patients with fibromyalgia. (11)

Conclusion:

In the early stage of Fibromyalgia pain and associated symptoms were reduced effectively by treating with Gabapentin and was safe as well as with fewer complications during medication.

Recommendation

Our study results recommend that gabapentin is one of the medications for treating fibromyalgia, it can be used in the treatment of early stage of fibromyalgia.

Limitation of the study

Our study was single-center study and had the small sample size, so we recommend a larger sample size and multi-centric study with longer follow up.

Conflict of interest

The authors declare no financial support or conflict of interest.

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