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Original Research Article

A Study to Find the Efficacy of Pregabalin in Diabetic Neuropathy Pain

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Abstract

Diabetes is a metabolic disorder and long standing diabetic patients are prone to get neuropathy. The pain I the neuropathy is unbearable and cannot be treated by cox inhibitors. Pregabalin is a structural similar drug of the inhibitory neurotransmitter γ-amino butyric acid but it is not functionally the same. It binds to the α-2-δ subunit of voltage-gated calcium channels reducing the release of several excitatory neurotransmitters and blocking the development of hyprealgesia and central sensitization. This study puts in a effort to find the efficacy of this drug in controlling the diabetic neuropathy pain.

Keywords: Pregabalin, efficacy, Diabetes, analgesia, pain.

INTRODUCTION

Diabetes is a metabolic disorder and long standing diabetic patients are prone to get neuropathy. The pain I the neuropathy is unbearable and cannot be treated by cox inhibitors. Pregabalin is a structural similar drug of the inhibitory neurotransmitter γ-amino butyric acid but it is not functionally the same. It binds to the α-2-δ subunit of voltage-gated calcium channels reducing the release of several excitatory neurotransmitters and blocking the development of hyprealgesia and central sensitization.

Opioids deals with acute pain and tricyclic antidepressants (TCAs) were used for chronic neuropathic conditions [1]. Pregabalin binds to the α-2-δ subunit of voltage-gated calcium channels reducing the release of several excitatory neurotransmitters and blocking the development of hyprealgesia and central sensitization [2]. Pregabalin has anticonvulsant anti-hyperalgesic and anxiolytic properties similar to gabapentin, but it has a more favorable pharmacokinetic profile including dose-independent absorption [3]. Recently the role as oral pre-emptive analgesic of pregabalin for postoperative pain relief has been reviewed [4, 5]. This study puts in a effort to find the efficacy of this drug in controlling the diabetic neuropathy pain.

AIMS AND OBJECTIVES

To study the efficacy of pregabalin in diabetic neuropathy.

MATERIALS AND METHODS

This study was done in the Department of Internal Medicine, Srinivas Institute of Medical Sciences.

Institution Ethical Clearance was obtained

This study was done using 60 patients. All were severely in pain according to pain numeric scale. They were given adjusted dose of pregabalin for 3 weeks and then they were checked for pain scores again and then reported. The study was done from July 2017 to June 2018.

Inclusion Criteria

- The patients were aged between 30-50 years

Exclusion Criteria

- Not consented patients

Numeric Pain Scale was used:

0	No Pain
1–3	Mild Pain (nagging, annoying, interfering little with ADLs)
4–6	Moderate Pain (interferes significantly with ADLs)
7–10	Severe Pain (disabling; unable to perform ADLs)

All the statistics were done using the SPSS software 2015 (California)

RESULTS

Table-1: Age Distribution

Number	Mean age	Std Deviation
60	37.27 years	11.48 years

Table-2: Sex Distribution

Number	Male	Female
60	49	11

Table-3: Co-Morbidities

Co-Morbidities:	Frequency
HTN	07
DM	01
DM and HTN	01
Vertigo	03
Any other CNS related illness	06
Any other CVS related illness	01
Any other Respiratory illness	01
Muscle Related Illness	01

Table-4: Pain Scale after 3 weeks of adjusted dose use

	Male	Female
Mild	41	9
Moderate	07	1
Severe	01	Nil

DISCUSSION

Pregabalin has anticonvulsant anti-hyperalgesic and anxiolytic properties similar to gabapentin, but it has a more favorable pharmacokinetic profile including dose-independent absorption[3]. Recently the role as oral pre-emptive analgesic of pregabalin for postoperative pain relief has been reviewed [4].

It is advantageous due to high efficacy with less drug doses and less chances of aspiration pneumonitis. Due to its limitations in the form of lesser control of block height & limited duration of analgesia researchers have used battery of drugs intrathecally like vasoconstrictors, (epinephrine) opioids, (fentanyl, buprenorphine) benzodiazepines, (midazolam) ketamine and many others as adjuvant to local anaesthetics to prolong the duration of sensory block & achieve longer perioperative analgesia [6, 7]. But each of this adjuvant has certain limitations of their own hence search for better options for acute postoperative analgesia research is still continuing. Provision of effective pain relief is a prerequisite accelerated convalescence. Previously the drugs used for acute & chronic pain were categorically different. Opioids, NSAIDS & local anaesthetics were tools for dealing with acute pain and tricyclic antidepressants (TCAs) were used for chronic neuropathic conditions.

Two comparative studies gabapentin v/s pregabalin using single oral pre-emptive drug for infraumbilical surgeries under SAB, for evaluation of their comparative efficacy in terms of a cute postoperative analgesic benefits with rescue analgesic as diclofenac have shown similar results to our study [8, 9].

CONCLUSION

Pregabalin is a good drug to control diabetic neuropathy pain.

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