Clinical Audit Of Gabapentin Use In Mental Health Hospital

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Background

Gabapentin was approved by FDA for the treatment of epilepsy, and an analgesic for post-herpetic neuralgia (PHN). Gabapentin has been prescribed off-label for a vast array of disorders including: insomnia, anxiety, bipolar disorder, behavioral disorders associated with dementia (BPSD), and migraine.

Gabapentin has been becoming dispensed extensively. Despite the number of patients using Gabapentin is nearly the same in 2016 and 2017, the consumption rate have increased about 33.5%. This study was initiated to evaluate the use of this drug. (Fig. 1).

Several pharmacovigilance-databases warned for potential abuse liabilities associated with gabapentin. The principal population at risk for addiction consists of patients with past or current history of substance use disorders (SUD), mostly pregabalin and multi-drug users, such as opioids. Prescribers should make a careful assessment to balance the potential benefits against risks.

Aims and hypothesis

To assess the rational use of gabapentin among a cohort of drug users, followed by subgroup analysis to determine the magnitude of drug misuse and diversion; a clinical retrospective audit was conducted throughout the year 2017 by a clinical pharmacist.

Methodology

Setting and study design:

All subjects treated in Mental Health Hospital (MHH) and RCC2 as outpatients (72 patients) are included in a retrospective clinical audit (study type: observational research, cross-sectional) followed by post-hoc analysis to measure the magnitude of drug-abusers in the sub-sample based on the indication for use. Patients must have had at least one drug claim for gabapentin between January 1, 2017 and December 31, 2017 to be included in the study. Data were collected, coded, analyzed using Stata software program, version 14.

Results

-No. of subjects: 72 (36 for Females VS 36 for males)

-Mean Age = 60.1 yr. , Median = 62.5 , Standard Deviation =21.6 Range (18 - 97 yrs.)

Documentation of ADRs in files:

- Documented= 39 Not documented=32

Indications:

a) patients with behavioral and psychological symptoms related to dementia (BPSD) =19 (30%)

b) patients with Documented current or past history of substance- use disorder (SUD)= 16 (27%)

Post- hoc Analysis of SUD patients:

there was a statistically significant relationship, using chi-square analysis, between Gender and SUD in the SUD group (P.one tail 0.002, P. two tail 0.004)

- 100 % of SUD was for Male gender.

- Mean age in SUD subgroup: 36.8 yr. +/- 12.2

[Standard Error (SE): 3.05 - C.I (30.2-43.3)]

-There was a non-statistically significant relationship between substance use and diabetes as a co-morbidity-(a source of confounding variable)- in the SUD group (P. 0.07 /effect size: 0.2) which potentiate the hypothesis of the medication's use for addiction rather than diabetes-related neuropathy.

-Significant co-medications with potentiality to be misused were found in SUD patients' charts: Benzodiazepines-pregabalin-Tramadol.

Conclusion & Recommendation

Through the data analysis, it was documented that almost 100% of gabapentin use in this setting was for off-label indications. This study highlights the need to standardize a hospital protocol for Gabapentin use within our facility, especially among patients with history of SUD. Without a protocol, reduction of misuse rate might be difficult. The overall documentation of side effects by physicians should be improved.