ZITA MEDICAL MANAGEMENT

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PHARMAKEFTIKI, 37, 2S, 2025 | 326-329 RESEARCH

https://doi.org/10.60988/p.v37i2S.220

Pregabalin prescription patterns in private clinics in Iraq: a cross-sectional study

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KEY WORDS:
pregabalin; private clinics; neuralgia; neuropathic pain; misuse

ARTICLE INFO:
Received: January 18, 2025
Revised: February 09, 2025
Accepted: February 17, 2025
Available online: October 10, 2025

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ABSTRACT

Pregabalin, despite its widespread use across neurology, psychiatry, and primary care, is increasingly recognized for its potential to be misused. Reports have documented rising prescription volumes alongside anecdotal evidence of an expanding illicit market. This study, conducted at private clinics in Diyala, Iraq, between January and December 2024, aimed at evaluating the pregabalin prescribing patterns in Iraqi general practice and at assessing whether its use warrants concern. Pharmacologically, pregabalin exhibits GABA-mimetic properties and may exert direct or indirect effects on the dopaminergic reward pathway. Although its addiction liability at therapeutic doses is considered low, the perception among misusers that pregabalin constitutes a legitimate substitute for illicit substances raises public health concerns. Our study has found that 45% of pregabalin users were aged 60–69 years. Prolonged use (>4 weeks) was observed in 75% of cases and was statistically significant (p<0.001). Insomnia accounted for 43% of prescriptions, also reaching statistical significance (p<0.001). These findings underscore the importance of thorough clinical assessment prior to pregabalin initiation, including evaluation of any history of substance misuse and vigilance for signs of abuse during treatment.

1. Introduction

Pregabalin is an anticonvulsant medication primarily used in the treatment of epilepsy. Although it is a structural analogue of γ-aminobutyric acid (GABA), pregabalin does not directly interact with either GABA

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or benzodiazepine receptors. Instead, it inhibits the release of several central neurotransmitters, including substance P, glutamate, and norepinephrine[1]. In cases where patients with epilepsy exhibit poor response to conventional anticonvulsant therapy, pregabalin is often prescribed as a second-line agent.

Currently, pregabalin is licensed for the treatment of neuropathic pain (particularly diabetic neuropathy), fibromyalgia, postherpetic neuralgia, seizures, and generalized anxiety disorder. It is also frequently used off-label for conditions such as migraine, alcohol withdrawal syndrome, restless legs syndrome, and menopausal vasomotor symptoms[2,3].

Recent global publications have highlighted the emerging risk of pregabalin misuse. In Munich, Germany, the number of individuals abusing pregabalin increased from zero in 2008 to five in 2011, and then to 105 by 2015, according to Zellner *et al.*[4]. Zhou *et al.*[5] have reported that pregabalin-related ambulatory care visits in the United States have doubled between 2003 and 2016, with 50.0% of the cases involving a co-abuse of benzodiazepines and/or opioids without a prescription.

Concerns regarding both patient and clinician awareness of pregabalin's abuse potential have been raised, particularly in light of findings that 45.8% of pregabalin prescriptions were issued by clinicians[6]. Many patients who misused pregabalin after receiving it legally were unaware of its addictive properties, underscoring the need for increased public education regarding its potential for abuse[7]. Recent studies have shown that pregabalin carries a similar risk of misuse to gabapentin[8]. In Iraq, the patients most likely to misuse pregabalin include those with spinal disc herniation, chronic pain, and neuropathic pain.

2. Methodology

This cross-sectional observational study was conducted at private clinics in Diyala, Iraq, between January and December 2024. Data on pregabalin prescriptions were collected, with particular emphasis on therapeutic indications, identification of misuse, and associated factors. Ethical approval was granted by the Research Ethical Committee of the College of Pharmacy of the Bilad Alrafidain University (10 December 2023).

The dataset comprised 400 pregabalin prescriptions issued during the study period. Eligibility criteria included all prescriptions involving pregabalin, irrespective of indication. Prescriptions with incomplete documentation or unrelated to pregabalin were excluded. Data were systematically extracted and categorized into key variables: patient demographics (age and gender), prescription characteristics (dosage, duration of therapy, and indication), co-prescriptions (e.g., non-steroidal anti-inflammatory drugs / NSAIDs, opioids, or antidepressants), prescription validity (distinguishing valid from invalid prescriptions), and adverse effects or withdrawal symptoms (as reported by patients). Primary outcomes included patterns of prescription validity, usage trends, and prevalence of misuse indicators. Secondary outcomes assessed the incidence of adverse effects and withdrawal symptoms.

Statistical analysis was performed by using the SPSS version 22 software. Descriptive statistics summarized both the demographic and the prescription data. Chi-square tests and other inferential methods were applied in order to evaluate associations, with p-values <0.05 considered statistically significant.

3. Results and Discussion

The majority of patients (45%) were aged 60–69 years, followed by those aged 50–59 years (24%) and 40–49 years (16%). Prescriptions were relatively balanced by gender, with 55% issued to males and 45% to females. Dosage distribution showed that 55% of prescriptions were for 75 mg and 45% for 150 mg; however, the preference for 75 mg was not statistically significant ($p=0.317$). Prolonged use (>4 weeks) was observed in 75% of cases, a statistically significant finding ($p<0.001$). Insomnia was the most common indication (43%), followed by peripheral neuropathy (23%), chronic back pain (18%), and mood stabilization or rest (10%).

NSAIDs were co-prescribed in 65% of cases, followed by antidepressants (60%) and opioids (56%). Table 1 summarizes key findings, including significant trends in prescribing practices and associations between dosage, duration, and co-prescription patterns.

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Table 1. Summary of the identified pregabalin prescription patterns across demographic categories, dosage preferences, treatment durations, co-administration patterns, and therapeutic indications. Key statistical outcomes are reported in order to highlight significant associations (denoted by *). Abbreviations used: NSAIDs, nonsteroidal anti-inflammatory drugs.

Variable	Results		Chi-square value	*p*-value
Age distribution	40–49 years	16%	23.28	<0.001
	50–59 years	24%		
	60–69 years	45% *		
	70–79 years	15%		
Gender distribution	Male	55%	1.00	0.317
	Female	45%		
Drug dosage	75 mg	55%	1.00	0.317
	150 mg	45%		
Duration of use	<2 weeks	10%	78.50	<0.001
	2–4 weeks	15%		
	>4 weeks	75% *		
Co-administration	Antidepressants	60%	3.84	0.279
	NSAIDs	65%		
	Opioid drugs	56%		
	Cardiovascular drugs	45%		
Indications	Peripheral neuropathy	23%	41.90	<0.001
	Insomnia	43% *		
	Chronic back pain	18%		
	Mood / rest	10%		
	Others	6%		

This study provides insight into pregabalin prescribing and potential misuse within private clinics in Diyala, Iraq. The findings reflect growing concerns regarding misuse in clinical settings. Although pregabalin has low addictive potential at therapeutic doses, the high prevalence of prolonged use and co-prescription with central nervous system (CNS) depressants such as opioids and benzodiazepines necessitates caution.

Our results align with broader trends reported in the literature. A decade-long analysis of pregabalin prescribing patterns revealed a consistent increase in its use, particularly among older adults, with prolonged therapy identified as a potential misuse indicator[8]. This is consistent with our observation of extended treatment durations in an older patient cohort.

Further research in forensic settings has emphasized pregabalin's misuse potential, especially among individuals with prior substance use disorders[9]. Although our study did not specifically assess substance use histories, the high rate of co-prescriptions with opioids and antidepressants raises concern about misuse risk in vulnerable populations.

Finally, qualitative studies have shown that some patients self-medicate with pregabalin for anxiety and chronic pain, often without medical oversight[3,7]. This resonates with our data, where insomnia – a condition frequently associated with anxiety – was the leading indication. A study by Mikhael *et al.*[10], conducted in Iraqi private clinics, has reported similar patterns of pregabalin misuse alongside CNS depressant prescriptions, corroborating our findings. These co-prescription trends highlight the need for targeted interventions by clinicians and pharmacists in order to mitigate associated risks.

4. Conclusion

The findings of this study are consistent with those of

previous studies indicating an increase in pregabalin prescriptions and highlighting its potential for misuse. These parallels underscore the importance of cautious prescribing, particularly when pregabalin is co-administered with CNS depressants or used off-label. Comprehensive patient assessment, education, and monitoring are essential in order to enhance safety and reduce the risk of misuse.

Acknowledgements

We extend our sincere gratitude to the University of Bilad Alrafidain, Tikrit University, and Al-Bayan University for their support in facilitating this study.

Conflicts of interest

None exist.

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References

1. Evoy K.E., Sadrameli S., Contreras J., Covvey J.R., Peckham A.M., Morrison M.D. Abuse and misuse of pregabalin and gabapentin: a systematic review update. *Drugs* 81(1), 125–156, 2021. DOI: 10.1007/s40265-020-01432-7
2. Bonnet U., Scherbaum N. How addictive are gabapentin and pregabalin? A systematic review. *Eur. Neuropsychopharmacol.* 27(12), 1185–1215, 2017. DOI: 10.1016/j.euroneuro.2017.08.430
3. Servais L., Huberland V., Richelle L. Misuse of pregabalin: a qualitative study from a patient's perspective. *BMC Public Health* 23(1), 1339, 2023. DOI: 10.1186/s12889-023-16051-6
4. Zellner N., Eyer F., Zellner T. Alarmierender pregabalin-missbrauch: prävalenz im Münchener Raum, Konsummuster und Komplikationen. *Dtsch Med. Wochenschr.* 142(19), e140–e147, 2017. DOI: 10.1055/s-0043-104228
5. Zhou L., Bhattacharjee S., Kwoh C.K., Tighe P.J., Malone D.C., Slack M., *et al.* Trends, patient and prescriber characteristics in gabapentinoid use in a sample of United States ambulatory care visits from 2003 to 2016. *J. Clin. Med.* 9(1), 83, 2019. DOI: 10.3390/jcm9010083
6. Montastruc F., Loo S.Y., Renoux C. Trends in first gabapentin and pregabalin prescriptions in primary care in the United Kingdom, 1993–2017. *JAMA* 320(20), 2149–2151, 2018. DOI: 10.1001/jama.2018.12358
7. Al-Husseini A., Wazaify M., Van Hout M.C. Pregabalin misuse and abuse in Jordan: a qualitative study of user experiences. *Int. J. Ment. Health Addict.* 16(3), 642–654, 2018. DOI: 10.1007/s11469-017-9813-4
8. Benassayag Kaduri N., Dressler R., Abu Ahmad W., Rotshild V. Trends in pregabalin use and prescribing patterns in the adult population: a 10-year pharmacoepidemiologic study. *CNS Drugs* 38(2), 153–162, 2024. DOI: 10.1007/s40263-024-01064-5
9. Novotny M., Bulla J., Hubl D., Fischer S.K.M., Grosshans M., Gutzeit A., *et al.* Pregabalin use in forensic hospitals and prisons in German speaking countries-a survey study of physicians. *Front. Public Health* 11, 1309654, 2024. DOI: 10.3389/fpubh.2023.1309654
10. Mikhael E.M., Jebur N.J., Jamal M.Y., Hameed T.A. Perception, experience, and practice of Iraqi community pharmacists towards customers with substance use disorder. *SAGE Open Med.* 12, 20503121241275472, 2024. DOI: 10.1177/20503121241275472

HOW TO CITE:
Kurji H.A., Hasan A.K., Abbood M.K., Ali H.M. Pregabalin prescription patterns in private clinics in Iraq: a cross-sectional study. *Pharmakeftiki* 37(2s), 326-329, 2025. https://doi.org/10.60988/p.v37i2S.220