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LETTER TO EDITOR

Vomiting due to tramadol: a short report from the regional pharmacovigilance center, Western Nepal

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Introduction

Tramadol is an atypical, centrally acting analgesic, having an inherent multimodal action on opoid receptors, as well as on noradrenergic and serotonergic receptors.[1] It is an effective analgesic in moderate, and in some cases, severe pain[2], and has a place in pain management, in patients who do not respond to simple analgesics, and in whom NonSteroidal Anti Inflammatory Drugs (NSAIDs) are contraindicated.[3] In comparative studies in postoperative and post trauma pain, 100 mg of tramadol given intramuscularly or intravenously, was equivalent to 5- 10 mg of morphine.[3] Unlike other opoids, tramadol is not usually associated with development of tolerance, physical dependence, or psychological addiction, and has a reduced incidence and severity of opoid adverse effects, particularly respiratory depression, ileus and constipation[1], [4]

However, it may increase risk of seizure in susceptible patients with a history of epilepsy, or patients on antiseizure drugs.[4] As with other opoids, nausea and vomiting remain as problems in tramadol too. In this short communication, the authors highlight on vomiting due to Tramadol, and narrate their experiences regarding the reports of vomiting due to tramadol.

Methods

The Manipal Teaching Hospital (MTH) runs an Adverse Drug Reaction (ADR) monitoring program since September 2004. MTH is also recognized as the regional Pharmacovigilance center for ADR monitoring in the Western region of Nepal. Upon occurrence of an ADR due to a drug, it is reported to the Pharmacovigilance Center by Clinicians, Pharmacists and Nurses, by filling the ADR reporting forms. The ADR reports of tramadol induced vomiting received by the center till March 2006, are included in the analysis. The patient's case records were also analyzed for detailed evaluation. The causality assessment was carried out as per the Naranjo algorithm. [5]

Results

Altogether the center received a total of seven reports of vomiting due to tramadol during the study period. The details regarding the patients and the vomiting due to tramadol are listed in Table/Fig 1

Discussion

Incidence of vomiting due to tramadol:

The most frequent adverse gastrointestinal effects of tramadol are nausea (10% to 20%), and vomiting (3% to 9%). Vomiting has necessitated withdrawal of therapy in some patients[6],[7],[8]. Nausea occurred in 24, 34 and 40% of patients, and vomiting occurred in 9, 13 and 17% of patients receiving the drug for up to 7, 30, and 90 days, respectively. Nausea and vomiting may occur more frequently with higher doses and following rapid intravenous injection. [9]

Clinical trials involving tramadol administration for up to 90 days in 550 patients, reported nausea in 24% to 40%, constipation in 24% to 46%, and vomiting in 9% to 17% of patients. Medical conditions and other medications were present in some cases. [10]

Causality assessment:

In order to prevent the occurrence of similar ADRs in the future, there is a need for establishing the causal relation ship between the drug and the ADR. Several scales are used to carry out the causality assessment. We used Naranjo algorithm, [5] one of the commonly used algorithms, to carry out the causality assessment. It is an algorithm that is used to categorize ADRs as possibly, probably, or definitely due to a certain drug. It is based on the score calculated on the basis of points given for each of ten questions that comprises the algorithm. On a scale of 13, if the score is greater than 9, then the adverse reaction is categorized as definitely caused by the particular drug. A score of (5-8) is categorized as probable, while a score of (1-4) is categorized as possible. We found that all the cases of vomiting had a 'probable' relationship with tramadol. We could not confirm the diagnosis, as we did not perform the rechallenge.

Management of vomiting due to tramadol:

Metoclopramide has been useful in treating nausea and vomiting due to tramadol administration. A slow titration schedule starting at 25 milligrams (mg) daily, then increasing by 25-mg increments every 3 days to a target daily dose of 150 mg (in 13 days) or 200 mg (in 16 days), was associated with a significantly lower incidence of discontinuation due to nausea and/or vomiting, as compared to a faster 10-day titration to 200 mg (22% versus 46%, respectively; p = 0.008 and 0.006, respectively) in a controlled study of subjects previously intolerant to tramadol.[6], [11]

Analgesic potency of tramadol:

In comparative studies in postoperative and post-trauma pain, 100 mg of tramadol given intramuscularly or intravenously was equivalent to 5–10 mg of morphine. However, in severe pain associated with either surgery or cancer, morphine was more effective than tramadol, and remains the drug of choice. In acute and chronic non-malignant pain, oral tramadol 100 mg is comparable to a combination of paracetamol and codeine (1000 mg/60 mg). There have been few direct comparisons of tramadol with non-steroidal anti-inflammatory drugs, but the efficacy appears to be similar. [3]

Conclusion

Our experience suggests that the decision to prescribe tramadol should not be a trivial one. Tramadol has a place in pain management for selected patients who have not responded to simple analgesics such as paracetamol or aspirin, and in whom NSAIDs are contraindicated. For most patients, a combination of paracetamol and codeine will be equally effective, and possibly better tolerated than tramadol. Prior to prescribing tramadol to a patient, one should keep in mind the gastrointestinal effects of tramadol, and also the other potential side effects such as increased risk of seizures etc.

Table/Fig 1
The details of vomiting caused by tramadol

Serial No	Age (yrs)	Sex	Indication for tramadol	Dose and route	Mode of management	Causality assessment	Comments
1	52	F	Plantar fascitis	100 mg PO SOS	Drug stopped	probable	OPD patient, took tramadol 100 mg SOS
2	30	F	Postoperative pain	50 mg IM TDS	Drug stopped	probable	-
3	20	M	Trauma	50 mg PO TDS	-	probable	T. Tramadol 50 mg PO QID first 2 days them TID
4	30	F	Appendicectomy	50 mg PO BD	Drug stopped + domperidome administered	probable	-
5	20	M	-	Inj. Tramadol 50 mg TID	-	probable	-
6	65	M	Post operative pain	Tramadol	-	probable	Tramadol was administered on SOS basis
7	23	F	-	Inj. Tramadol 50 mg iv	-	probable	-

Note: '-' denotes the details are not available for these cases

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Appendix 1

Adverse Drug Reaction Reporting Form

Pharmacovigilance cell

(A unit of Drug Information Center)

Manipal Teaching Hospital, Pokhara

Patient's Name……. Age:…… Sex:……

I.P/O.P. No:…… Dept.:……

Generic/Brand name/Batch number of suspected drug(s):……

Starting date of the suspected drug: ……

Brief description of reaction:……

……

Name of the reporter: ……

Signature:…… Date: ……..

Please report any suspected ADRs to the pharmacovigilance cell/DIC or call 221
You need not to be sure, just report any suspected reactions