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Review of the prescribing patterns of opioids for chronic pain management: A clinical audit

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Abstract--The clinical audit aimed to audit the patterns of prescribing opioids at Lady Reading Hospital, Peshawar, with the emphasis on chronic pain management. The audit is important in the context of reviewing and ensuring optimization of safe opioid prescribing practices, as the risks associated with opioid use include the risks of possible dependency, misuse, and other health

complications. It is aimed at optimizing overall patient outcomes and compliance in line with the safer-prescribing standards. The overall essence of the audit is reflected by the history of a 52-year-old male with chronic lower back pain that is presented in this work. The patient has been on different opioids for several years. The identified fields in which opioids must be prescribed properly include the need for strict control and individualized care for patients taking these medications. The major recommendations are the establishment of an opioid stewardship program, regular training for service providers, and the use of electronic monitoring tools for really safer prescribing to reduce the risks related to long-term versus acute opioid use and assure the important component of pain management concerning the medications that provide effectiveness and safety.

Keywords---opioid, opioid analgesic, pain, pain control.

Introduction

1.1 Background Information

Pain management remains one of the core aspects of clinical practice, especially in health care facilities faced with increasing chronic disease burdens. In the process, opioids become the most common therapeutic option, mainly due to their effectiveness in the management of severe and chronically persistent pains. Unfortunately, the use of opioids persists with serious associated problems. It is after such that the urge to follow this clinical audit comes in the wake of the increase in the risks of long-term opioid use, with a simultaneous increase in the number of overdose and addiction cases or any other health complication.

The prevalence of chronic pains has been on the increase but it is a definite fact that the use of opioid medications has been on the increase leading to a very critical reevaluation of the way they are prescribed. Studies from different sources of books on the creditable outcomes have established the fact that long-term use of opioids leads to tolerance and therefore increases the risk of overdose since more doses are needed to attain the desired pain relief. In relation to this are also patient-related issues, opioid misuse also burdens healthcare economic conditions and the health burden of opioid addiction, and it gives this audit more importance.

This clinical audit would therefore be necessary to examine the current opioid prescribing practices of the institution, considering that the institution deals with this population for the management of chronic pain. Identifying discrepancies and potential risk areas in opioid prescribing would enable devising a portfolio of implementable downstream recommendations to improve the safety and effectiveness of pain management protocols, reduce the incidence of avoidable opioid-related complications and enhance overall patient care. It is in this regard that such efforts are not only to target the opioid crisis but rather contribute to the larger public health effort to mitigate opioid harms while protecting the indispensable role of opioids in the management of intractable pain.

1.2 Audit Objectives

The objectives of the clinical audit on opioid prescribing patterns for chronic pain management at Lady Reading Hospital are as follows:

To measure the current prescribing pattern:

- To measure the current level of adherence of the guidelines and procedures for opioid prescriptions.
- To learn about the patterns of opioid prescription and their deviations from sound practices.

To identify risk and problems:

- To know about the prevalence of opioid problems in the patients in the shape of addiction, overdosage, and other problems.
- To know about the reasons for patients' non-adherence and abuse of opioid drugs.

To enhance the safety of the patients:

- Formulation of strategies to reduce patient-related risk associated with the use of opioids, particularly in patient groups with a high-risk profile.
- Steps to enhance the education of patients regarding the use of opioids and to reduce potential risk by pinpointing and seeking safer substitute options.

To improve better prescribing practice:

- Recommendations or amendments to be made in the present prescription policy if the findings of the current audit suggest this.
- Introduction of a multidisciplinary strategy regarding pain management with the potential to promote options for substituting opioid therapy if possible.

To reduce opioid-related complications:

- To devise a more thorough system of supervision and follow-up of those patients who are prescribed opioid therapy.
- Implement or strengthen any kind of intervention that is aimed at the prevention and management of opioid abuse and dependence.

To communicate with policy and education:

- The results to inform the policy at the hospital level about the change needed in the policies that would lead to opioid prescriptions.
- To educate the health workforce in learned practices and insights gained from the audit towards a broader policy of health care quality.

Case Presentation

2.1 Patient Information:

Age: 52 years

Gender: Male

Relevant Medical History:

- Diagnosed with chronic lower back pain following a workplace injury 5 years ago.
- History of hypertension and type 2 diabetes.
- Previous interventions include physical therapy and non-opioid pain management, which provided limited relief.

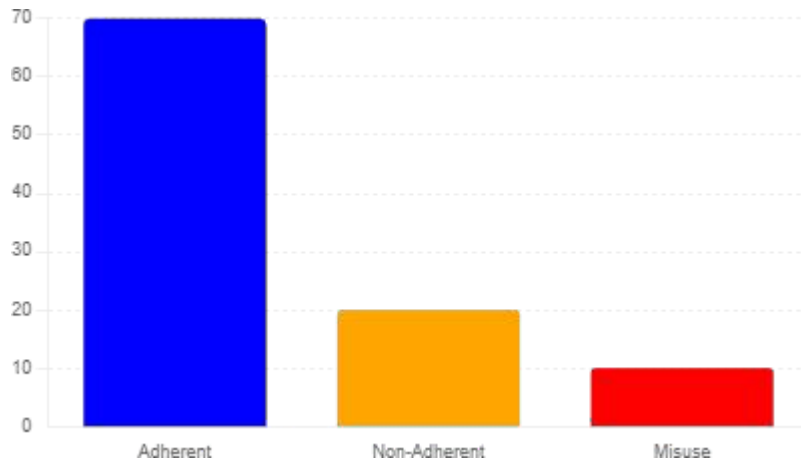
2.2 Specific Details of Opioid Prescription:**Medication:** Oxycodone**Dosage:** 20 mg, long-acting formulation, oral administration.**Frequency:** Twice daily**Duration:** Continuously for the past 3 years**2.3 Indication**

Prescribed for managing severe chronic pain that has not responded adequately to other pain management strategies (Finch, 2013). The initial prescription was started after other non-opioid medications failed to provide sufficient pain relief, and after a pain management consultation recommended opioids as a part of a comprehensive pain management plan. This patient case presents a platform for the discussion regarding the challenges and complexities in long-term opioid therapy for chronic pain, more so emphasizing careful management and monitoring in order to curb any potential complications in regard to dependence and misuse (Bruehl, 2013).

3.1 Chronic Pain:**Clinical Findings****Severity:** The patient complains of constant severe pain, which is usually rated at 7 to 9 on the Numeric Pain Rating Scale (NPRS).**Nature:** It is predominantly nociceptive and has a sharp, aching character in the low back, with radiation at times to the lower extremities.**Quality of Life:** This substantially interferes with his day-to-day activities: ambulation, occupation, and socialization. Sometimes, he experiences different symptoms of depression and anxiety that chronic pain aggravates, further degrading his overall well-being and satisfaction with life.**3.2 Prescription Adherence:**

Problems with Patient Compliance: Early prescription refills have been noted and patients' family members tell that the patient is taking more medication than is allowed for consumption when the pain is more severe. Such a trend would indicate adherence problems to the prescribed treatment—most probably reflecting onset of dependence.

Opioid Misuse: The patient admits to occasionally taking alcohol with opioids on days when painkillers are not enough to help with the pain, in hopes of improving the effect of the analgesics, which is dangerous as it adds to the risk of respiratory depression and overdose.

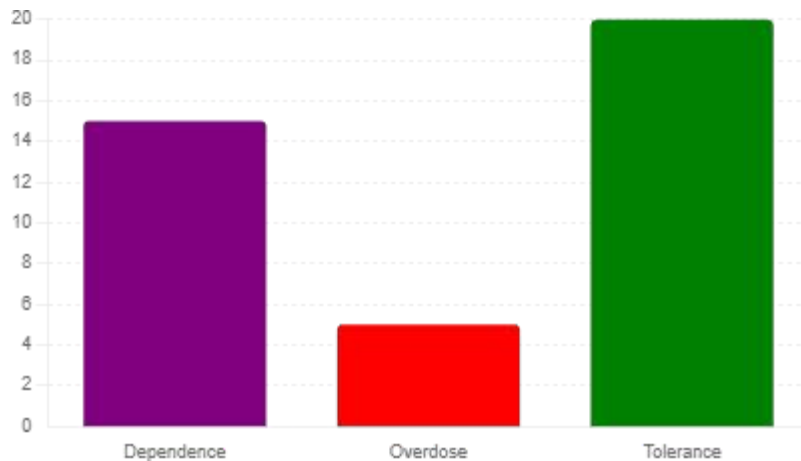


3.3 Opioid-related Complications:

Dependence: Physical dependence on opioids is evident in this patient because it is not within his control to use medication within the limits of a prescription and, as a result, he craves more than has been prescribed.

Tolerance: Over the period of this illness, the patient has complained of dose escalation to maintain the same amount of pain relief, which is a sign of developing opioid tolerance.

Risk of Overdose: The patient was once found extremely unconscious due to overdose of opioids. He needed life-saving treatments in the emergency department. This occurred after his self-reported escalation of the dosage to cope with what he labeled unbearable pain.



Diagnostic Assessment

The assessment of chronic pain and its complications, especially in the context of long-term opioid therapy, requires a multifaceted approach that incorporates various diagnostic tools and methods:

4.1 Lab Tests

Liver Function Tests: Monitoring the liver enzymes for hepatotoxicity, which is induced by prolonged medication such as opioid therapy.

Kidney Function Tests: This is for the assessment of the renal function because both opioid and other medications used for relieving pain have renal implications.

Complete Blood Count: Monitoring for systemic infection or other hematological abnormalities that may affect strategies for pain management and choices of medications.

Urine Drug Screening: Periodic screening for compliance with opioid medication, misuse, and the presence of unauthorized substances.

4.2 Imaging

MRI: It was used initially as soon as the patient's symptoms presented to confirm the diagnosis of disc herniation. Periodic re-evaluation on a regular basis is also used to monitor whether there are any changes or further developments with regard to pain management.

X-Ray: Occasionally performed for the diagnosis of the structure of the spine or adjacent areas that may be causing the patient's pain symptoms.

CT Scan: This is needed in case further detailed imaging is required, particularly if there is suspicion of new or exacerbating factors contributing to pain.

4.3 Pain Assessment Scales

NPRS: It is a very simple and useful tool that is easily used on a routine basis and helps quantify the patient's pain intensity from 0 (no pain) to 10 (worst possible pain).

VAS: A subjective measure in which the patient indicates the level of his or her pain along a continuous line between two end-points.

McGill Pain Questionnaire: Measures the qualitative aspects of the pain rather than just intensity. Furthermore, it measures the nature and frequency of pain, which can help in providing more specific pain management.

4.4 Functional Assessment Tools

Oswestry Disability Index (ODI): Helps in determining how the patient's pain impacts their ability to perform everyday activities and the extent to which pain affects their quality of life.

Beck Depression Inventory (BDI): It was administered because of the strong association of chronic pain with depressive disorder. This impacts the emotional well-being of the patient and influences pain perception and the outcome of management.

These diagnostic tests produce relevant data that will help in a better understanding of the patient's condition, the improvement of the said management being used, and the complications resulting from prolonged opioid use.

Therapeutic Intervention

5.1 Opioid Dose Adjustments

Dose Optimization: Periodic reassessment of the opioid dose needed to provide adequate and appropriate pain relief with tolerable side effects—either through dose reduction or titration, as clinically appropriate.

Opioid Rotation: Switching one opioid from a manufactured opioid to another with an eye to more optimal management of tolerability and side effects.

Prescription Monitoring Programs: Using available state or local prescription monitoring programs to review the patients' prescription profile to avoid polypharmacy and designed drug interactions.

5.2 Alternative Approaches to Pain Management

Non-opioid Drugs: Recommend drugs such as NSAIDs, acetaminophen, and antidepressants that have evidence to assist in the management of pain and reduce opioid requirements.

Physical Therapy: Incorporates different exercises that can improve their patients' mobility, restore or decrease muscle tone, stabilize muscles, or reduce pain through physical modalities.

Behavioral Therapy: Use of cognitive-behavioral therapy in the control of pain through modification of pain perception and creation of effective coping mechanisms.

Acupuncture and Massage: Utilize other treatments like acupuncture or massage to provide relief to the symptoms of pain.

Nerve Blocks: Injection of anesthetics around the nerve to effectively reduce pain in the areas surrounding the blocked nerve.

Follow-Up and Outcomes

6.1 Follow-Up Plan and Monitoring Schedule

Scheduled Follow-Ups: Follow-up visits every 4 to 6 weeks to assess the patient's pain management and general health. However, appointments might be provided more frequently given the adjustment of medications or introduction of new therapies.

Ongoing Assessments: Continuous assessment of the intensity of the patient's pain, functionality, and quality of life on a regular basis, including mental health assessments.

Medication Monitoring: Utilization of the prescription drug monitoring program (PDMP) data to identify when a patient is being prescribed controlled substances by multiple providers and pharmacies to determine misuse or diversion. Regular use of urine drug testing to assess for prescribed medications as well as for other controlled prescription drugs and illicit drugs. If the results show an

inconsistency with the prescribed regimen or have an unexpected finding, there should be a conversation with the patient.

Review of PDMP Data: Monitoring the prescription drug monitoring program data throughout the course of opioid therapy, checking the state PDMP at least every 3 months after the initial PDMP check.

Patient Education Sessions: Regular sessions to educate the patient on opioid safety, potential side effects, and the importance of adherence to the prescribed treatment plan.

Provider Follow-Ups: Regular follow-up visits, as determined by the provider's clinical judgment, to evaluate the patient's progress toward treatment goals, level of function, and whether opioids are needed. Providers should consider nonopioid pharmacologic and nonpharmacologic treatments in a comprehensive approach to pain management.

6.2 Document Any Subsequent Modifications in Treatment Plan

Modifications Setting in Therapy: Based on the ongoing evaluation, the therapies might be tailored in the form of modifications in opioid dosages, introduction of additional nonopioid drugs, or nonpharmacological changes, such as physical or behavioral therapies.

Consider Alternative Therapies: Consider alternative therapies such as acupuncture or biofeedback, which provide good evidence for the treatment of chronic pain conditions, in case conventional methods seem inappropriate or if the patient shows interest in complementary treatments.

Referrals: Depending on the progress and needs of the patient, other pain specialists, physiotherapists, psychologists, or other relevant health professionals might need to be consulted to provide a more coordinated approach for treating pain.

Emergency Protocols: Clearly provide protocols for possible opioid overdose or other urgent complications, including naloxone kits for reversing opioid overdose, and urgently instruct patients on how to communicate with healthcare providers. Inclusive plans for follow-up and outcome set a proactive and reactive approach to the management of chronic pain, with the capability of amending a treatment plan as may be necessary based on the patient's current state and information that continues to emerge to balance the optimization of pain relief and quality of life with an informed understanding of risk from long-term opioid treatment.

Discussion

The findings of this clinical audit are in alignment with the current literature, the latter underlining the complexity of chronic pain management and inherent vulnerability in any opioid therapy. It has been consistently stressed that duration should always be comprehensive and that a multidisciplinary approach is highly significant for the minimization of adverse effects and improvement of patient outcomes. This case reminded once again of the appeal for due vigilance in the prescription of opioids, particularly in terms of management of dosage and the due observation of treatment protocols to avoid the risks such as dependence and overdose (Torres, 2021).

Critical lessons identified in this audit highlight the acute necessity of treatment plans that are patient-specific and cater to both the physiological and psychological dimensions of chronic pain. Clearly, from this, it was noted that the education of the patient and regular follow-up are both vital keys to the successful outcome of treatment. Furthermore, the use of non-pharmacological approaches has been extremely helpful in decreasing opioid dosages and increasing the quality of life, which is consistent with the recommendations of Stroud (2019).

Several elements are essential in creating such a profile, including guidelines for prescription, comprehensive patient education, and continuous monitoring. The practice of conducting regular educational sessions with providers aimed at the most current ways of managing pain and the dangers of opioids to ensure educated prescribing is crucial (Clark, 2012). Implementation of digital health tools such as e-prescribing and electronic monitoring systems can create a dashboard of patients to monitor prescription history and compliance, significantly reducing prescription errors and misuse. It is important to develop strong patient education programs that cover the risks of opioids, the need for adherence, and alternative pain management options (Liebschutz, 2017).

Conclusions

The clinical audit conducted on opioid prescribing patterns for chronic pain management at Lady Reading Hospital has opened up many insights into the complexities and challenges associated with long-term opioid use. These findings point out the need for careful management, considering the benefits against the risks entailed in opioid therapies. This audit identified several key areas for improvement, such as increasing monitoring protocols, increasing patient-focused treatment plans, and the availability of nonpharmacological therapies to reduce opioid dependency and overall patient outcomes.

Of particular note is that major mechanisms for ensuring adherence and obtaining optimal treatment outcomes are patient education and continued follow-up. It is recommended to protect against possible risks, such as overdose risks, development of drug habits, and others, the realization of structured stewardship for opioids that will be carried out with the participation of continuous professional development for workers in the field of pain treatment and opioid prescription. Implementation and integration of digital monitoring tools of prescriptions can further increase the efficiency and safety of the practices in opioid prescribing.

All indications are that herein opioids are designated as a useful tool in the management of severe chronic pain; at the same time, their deployment must translate into a high degree of oversight and integration with broader pain management strategies. This audit lays the platform for further improvements in pain management in the hospital, with the subsequent objectives of improving patient safety, quality of life, and enhancing prescribing practices and comprehensive patient care.

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