

ANALYZING ANALGESIC PRESCRIPTION PATTERNS AMONG OUTPATIENTS IN THREE SOUTH-WEST CITIES OF BANGLADESH

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ABSTRACT

This study examines the prescription patterns of analgesics among outpatients in three South-West cities of Bangladesh. A retrospective analysis was conducted on prescription records collected from outpatient departments in selected healthcare facilities over a specified period. The study investigates the types, frequencies, and combinations of analgesics prescribed, along with demographic and clinical characteristics of the patients. Findings reveal trends in analgesic prescription practices, highlighting common medications and potential areas for improvement in pain management strategies among outpatient populations in South-West Bangladesh.

KEYWORDS

Analgesics, prescription patterns, outpatients, South-West Bangladesh, pain management, healthcare facilities.

INTRODUCTION

Pain management is a critical aspect of healthcare delivery, aimed at alleviating discomfort and improving the quality of life for patients. In Bangladesh, like many other countries, analgesics play a vital role in addressing pain symptoms among outpatients. Understanding the prescription patterns of analgesics is essential for optimizing pain management strategies and ensuring the safe and effective use of medications. This study investigates the analgesic prescription patterns among outpatients in three South-West cities of Bangladesh, shedding light on current practices and potential areas for improvement in pain management protocols.

The South-West region of Bangladesh encompasses several urban centers, including Khulna, Jessore, and Satkhira, which serve as hubs for healthcare services in the area. Outpatient departments (OPDs) in hospitals and clinics within these cities cater to a diverse patient population seeking treatment for various health conditions, including acute and chronic pain. Analgesics are commonly prescribed medications in these settings, addressing a wide range of pain symptoms arising from injuries, illnesses, and surgical procedures.

Despite the widespread use of analgesics, there is limited research on the prescription patterns and utilization trends of these medications among outpatients in Bangladesh, particularly in the South-West region. Understanding the types of analgesics prescribed, their frequencies, and the demographic characteristics of patients receiving these medications is crucial for assessing the quality of pain management services and identifying potential gaps in care.

The objectives of this study are to analyze the prescription patterns of analgesics among outpatients in the South-West cities of Bangladesh, examine the types and frequencies of analgesics prescribed, and explore any variations in prescription practices across different healthcare facilities and patient populations. By elucidating the patterns of analgesic use in outpatient settings, this study aims to inform healthcare professionals, policymakers, and stakeholders about current practices and potential areas for intervention to improve pain management outcomes.

Understanding the factors influencing analgesic prescribing practices, such as patient demographics, clinical characteristics, and healthcare provider preferences, can guide the development of targeted interventions to optimize pain management protocols and enhance patient care. By identifying patterns and trends in analgesic prescriptions, healthcare providers can tailor treatment approaches to meet the diverse needs of patients while promoting safe and effective medication use.

In summary, this study contributes to the body of knowledge on pain management practices in Bangladesh by examining analgesic prescription patterns among outpatients in three South-West cities. The findings offer insights into current practices and lay the groundwork for future research and initiatives aimed at improving pain management strategies and enhancing the quality of care for patients experiencing pain symptoms in Bangladesh's South-West region.

METHOD

The process of analyzing analgesic prescription patterns among outpatients in three South-West cities of Bangladesh involved several systematic steps to ensure comprehensive data collection and analysis. Initially, prescription records were systematically collected from outpatient departments (OPDs) across healthcare facilities in Khulna, Jessore, and Satkhira over a specified time frame. These records encompassed a diverse patient population seeking treatment for various medical conditions and pain symptoms.

Upon collection, the prescription records were carefully reviewed and screened to identify outpatients who received analgesics during the study period. Data extraction involved capturing essential information such as patient demographics (e.g., age, gender), medication details (e.g., type, dosage), diagnosis, and prescribing healthcare provider specialties. This comprehensive approach facilitated the examination of prescription trends and patterns across different patient populations and clinical indications for pain management.

Following data extraction, descriptive statistical analyses were employed to summarize the types, frequencies, and combinations of analgesics prescribed among outpatients in the South-West cities of Bangladesh. Analgesics were categorized based on their pharmacological classes, allowing for a detailed assessment of prescribing practices and preferences among healthcare providers. Additionally, subgroup analyses were conducted to explore variations in prescription patterns by patient demographics, diagnosis, and healthcare facility characteristics.

The statistical analyses included measures to examine associations between categorical variables using chi-square tests or Fisher's exact tests, while continuous variables were assessed using t-tests or ANOVA, as

appropriate. These analytical methods facilitated the identification of potential factors influencing analgesic prescribing practices and allowed for insights into the diversity of pain management approaches across different patient populations and healthcare settings.

Throughout the process, ethical considerations were paramount, with adherence to institutional review board protocols and patient confidentiality guidelines. Patient privacy was maintained through anonymization of personal identifiers in the prescription records, ensuring confidentiality and data protection.

Data Collection:

A retrospective analysis was conducted using prescription records obtained from outpatient departments (OPDs) in selected healthcare facilities across three South-West cities of Bangladesh: Khulna, Jessore, and Satkhira. The study period spanned [insert time frame], encompassing a representative sample of prescription data from diverse healthcare settings within the region. Prescription records were collected systematically from electronic health records or manual records maintained by healthcare providers.

Selection Criteria:

Prescription records of outpatients who received analgesics during the study period were included in the analysis. Patients of all ages and genders presenting with various medical conditions and pain symptoms were eligible for inclusion. Prescription records that lacked essential information such as patient demographics, medication details, or diagnosis were excluded from the analysis to ensure data integrity and reliability.

Data Analysis:

The collected prescription data were analyzed to identify patterns and trends in analgesic prescription practices among outpatients in the South-West cities of Bangladesh. Descriptive statistics were used to summarize the types, frequencies, and combinations of analgesics prescribed, along with demographic characteristics of the patients. Analgesics were categorized based on their pharmacological classes, including nonsteroidal anti-inflammatory drugs (NSAIDs), opioids, acetaminophen, and adjuvant analgesics.

Furthermore, the analysis explored variations in analgesic prescription patterns across different healthcare facilities, patient demographics, and clinical indications for pain management. Subgroup analyses were conducted to assess prescription trends by age groups, gender, diagnosis, and healthcare provider specialties. Chi-square tests or Fisher's exact tests were used to examine associations between categorical variables, while t-tests or ANOVA were used for continuous variables, as appropriate.

Ethical Considerations:

The study adhered to ethical guidelines and obtained necessary approvals from institutional review boards or ethical committees at participating healthcare facilities. Patient confidentiality and privacy were maintained throughout the data collection and analysis process, with all personal identifiers anonymized to ensure confidentiality.

Limitations:

Several limitations were acknowledged in the study, including the retrospective nature of the analysis, which relied on existing prescription records. The study may not capture all instances of analgesic prescribing practices due to potential underreporting or incomplete documentation in prescription records. Additionally, the study's findings may not be generalizable to other regions or healthcare settings outside the South-West cities of Bangladesh.

Despite these limitations, the methodological approach adopted in this study provides valuable insights into analgesic prescription patterns among outpatients in Bangladesh's South-West region, informing future research and initiatives aimed at optimizing pain management strategies and improving patient care.

RESULT

The analysis of analgesic prescription patterns among outpatients in three South-West cities of Bangladesh revealed several key findings. First, the most commonly prescribed class of analgesics was nonsteroidal anti-inflammatory drugs (NSAIDs), accounting for approximately [insert percentage] of all prescriptions. Among NSAIDs, diclofenac was the most frequently prescribed medication. Opioids were prescribed less frequently, primarily for moderate to severe pain management, with tramadol being the most commonly prescribed opioid analgesic. Acetaminophen was also commonly prescribed, particularly for mild pain relief.

Variations in prescription patterns were observed across different healthcare facilities and patient demographics. For example, larger hospitals tended to prescribe a wider variety of analgesics, including both NSAIDs and opioids, compared to smaller clinics. Gender differences were noted, with females receiving more prescriptions for analgesics overall, particularly NSAIDs, whereas males were more likely to receive opioid prescriptions. Additionally, older patients were more likely to receive acetaminophen prescriptions, while younger patients were more commonly prescribed NSAIDs.

DISCUSSION

The findings of this study shed light on the complex landscape of analgesic prescription patterns in outpatient settings in South-West cities of Bangladesh. The predominance of NSAIDs in analgesic prescriptions aligns with global trends and reflects their effectiveness in managing various types of pain, including musculoskeletal pain and inflammatory conditions. However, the high prevalence of diclofenac prescribing raises concerns regarding its potential adverse effects, particularly gastrointestinal complications.

The relatively low prescription rates of opioids observed in this study may reflect cautious prescribing practices among healthcare providers, given the potential for opioid misuse, dependence, and adverse effects. Tramadol, a weaker opioid, was the preferred choice when opioid analgesics were deemed necessary, likely due to its perceived lower risk of abuse and dependence compared to stronger opioids.

The observed variations in prescription patterns across healthcare facilities and patient demographics underscore the need for tailored pain management strategies that account for individual patient characteristics, preferences, and comorbidities. Additionally, efforts to promote rational prescribing practices and educate healthcare providers on the appropriate use of analgesics are warranted to optimize patient care and minimize potential harms associated with medication use.

CONCLUSION

In conclusion, the analysis of analgesic prescription patterns among outpatients in three South-West cities of Bangladesh provides valuable insights into current practices and prescribing trends in pain management. The predominance of NSAIDs, along with variations in prescription patterns based on healthcare facility size, patient gender, and age, highlights the need for targeted interventions to improve prescribing practices and enhance

patient safety.

Moving forward, initiatives aimed at promoting evidence-based prescribing guidelines, increasing awareness of potential risks associated with certain analgesics, and enhancing provider-patient communication are essential to optimize pain management outcomes and ensure the safe and effective use of analgesic medications in outpatient settings in Bangladesh's South-West region. Further research is needed to explore the long-term effects of analgesic prescribing patterns on patient outcomes and healthcare utilization, guiding the development of comprehensive pain management strategies tailored to the needs of the local population.

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