


Drug Use and Abuse among Orthopedic Ward Patients—A Revolving Cycle of Menace in Atbuth, Bauchi

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Abstract

Background: The use of drugs for purposes other than those for which they are meant to be used or in excess amounts. Psychoactive drugs are some of the drugs more commonly abused, also, antibiotics and other medications too can be misused. Drug abuse and misuse can lead to serious social, medical and emotional harm to the patients, and antibiotic resistance that makes treatment harder are also likely complications. **Method:** Patients in both male and female wards of the Orthopaedics Department of ATBUTH, Bauchi were interviewed using a structured questionnaire and their responses were recorded and data were analyzed using the SPSS version 29. **Results:** A total of 112 patients were interviewed, 76 males and 36 females. Thirty-two (28.6%) patients had taken various kinds of unprescribed medications while on admission: 9 patients had taken unprescribed tramadol, 4 patients had taken codeine, 6 Ampiclox, 5 flagyl and about 8 patients had taken different kinds of traditional medications while on admission. Among the 32 patients, 23 (72%) are aged less than 30 years, 5 (16%) are aged between 30 and 50 years and 4 (12%) are aged above 50 years. Sixteen (50%) had such medications brought to them by relatives or friends, 10 (30%) were given by other patients on admission, 5 (15%) brought or bought the drugs by themselves while 1 (5%) were given by a non-clinical staff of the hospital. **Conclusion:** Drug misuse and abuse is a very serious, deleterious practice with destructive consequences in its wake, such consequences as drug dependency with all its antecedent effects, antibiotic resistance and difficulties in controlling/managing infections are but a few. So, it's very important to both educate patients about these terrible practices and cope with the spread of them in our wards and hospitals.

Keywords

Drug Abuse, Misuse, Dependency, Resistance

1. Introduction

Drug abuse is defined as the frequent use of illegal drugs or the misuse of legal drugs [1]. Prescription drug misuse is defined as the use of drugs without prescription or in ways not intended by the prescriber [2]. The abuse of substance either licit or illicit is a huge cause of concern due to its devastating effect on the health of the individual concerned as well as the socio-economic consequences and impact on loved ones and family members [3]-[5]. Antibiotic overuse and misuse are also an important factor in the development of bacterial mutations responsible for antimicrobial resistance [6]. Patients also use various types of herbal medications even while on admission to the hospital and it has been found that only 50% of patients inform their doctors of their herbal drug use [7]. There have been reports on drug interactions between conventional drugs and traditional herbal medications with possible harmful effects on the patients [8] [9].

Most herbal medications are introduced to the market without any mandatory safety or toxicology evaluation and are taken by patients, leading to possible serious health hazards [10], it has been noted that use of herbs or traditional drugs with other orthodox medications may mimic, magnify or oppose the effects of the orthodox drugs [11], which can lead to serious untoward clinical consequences depending on the condition, the degree of interaction and effects. There are reported cases of contamination of Chinese medicine with heavy metals such as lead, mercury, cadmium, and arsenic, which are toxic and poisonous to the body system [12] [13].

Irrational use of antibiotics has been regarded as common in developing countries, where the prevalence of infectious disease burden has been aggravated by uncontrolled access to these antibiotics [14], this condition is worsened with inappropriate self-medication [15]. The lack of control over the sales and advertisement of antibiotics creates space for misinformation and misperception, which can exacerbate antibiotic misuse [16]. The common factors associated with antimicrobial self-medication in developing countries include past successful use [17], low level of education [18], female gender [17], age [19], and middle income [17] [20].

Thus, drug abuse or misuse, either of prescription drugs or not, psychoactive substance or antibiotics, conventional drugs or herbal medications, all pose an unfavorable outcome to both the user and his loved ones and a challenge to the health care provider who may find it difficult to understand the strange findings in such patients that may not be explained by his or her admitted condition.

There is not much data on the prevalence of drug abuse or misuse amongst in-patients and the possible spread of such habit between patients and or their caregivers. Our study seeks to find out this possible trend and help find a way to curtail it in a

bit to halt the various levels of dangers that can spread from such ill practices.

2. Methodology

This prospective study was carried out in Abubakar Tafawa-Balewa University Teaching Hospital Bauchi, a tertiary hospital that houses different specialists and sees patients mainly from the North-Eastern region of Nigeria, West Africa. Ethical approval was granted by the hospital research and ethical committee. All patients admitted to the male and female orthopedic wards from 1st January 2024 to 1st June 2024 (6 months duration), were eligible for the study. Patients admitted to other wards were excluded from the study, Patients admitted to the wards outside the study period were excluded from the study, those who do not consent to the study were excluded from the study. Those that sign to leave against medical advice were excluded from the study. All the patients were followed from admission to discharge despite the duration of hospital stay or outcome of treatment.

Patients and or their caregivers were interviewed by the investigators and information collected using a structured questionnaire. Data regarding diagnosis of the patients, prescribed medications, frequency, routes of administrations and results of investigations were gotten from the patients file and vital logs. Verbal informed consents was gotten from each patient before conducting the interviews. Interviews were conducted in a closed office to maintain confidentiality, and patients can decide to opt out of the study if they wish to or discontinue the line of questioning temporary and continue when they are comfortable. The head of the wards were informed before the onset of the study. The questionnaires have about 28 items and takes an average of 15 - 20 minutes to complete an interview on one patient. Questions on the patient's biodata, level of education, type of drugs misuse or abuse and source of the drugs, perception of use of unprescribed drugs and its dangers were asked amongst many other questions. Information collected were documented, gathered and analyzed using the SPSS version 29 statistical package. Descriptive statistics was used to describe age, sex, pattern of drug use and misuse, histogram was used to depict frequency of drug use and misuse. Chi square was used for statistically significant relationships between variables at 95% confidence interval.

3. Results

A total of 112 patients were interviewed, 76 males and 36 females. Thirty-two patients 28.6% had taken various kinds of unprescribed medications and or traditional concoction while on admission: 28 males and 4 females with a male to female ratio of 7:1. Of the 32 patients, 9 patients had taken unprescribed tramadol, 4 patients had taken codeine, 6 Ampiclox, 5 flagyl and about 8 patients had taken different kinds of traditional medications while on admission (**Figure 1**). Among the 32 patients, 23 (72%) are age less than 30 years, 5 (16%) are age between 30 and 50 years and 4 (12%) are age above 50 years (**Table 1**). Sixteen (50%) had those medications brought to them by relatives or friends, 10 (30%) were given by another

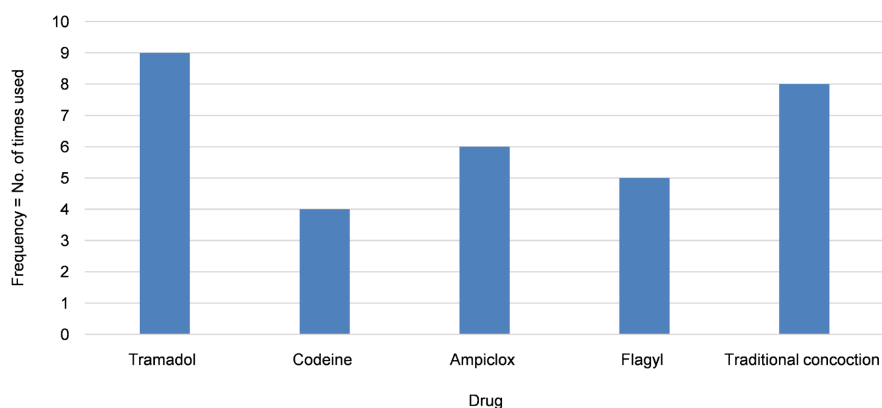


Figure 1. Drug use and abuse in orthopedic ward ATBUTH against frequency of use.

Table 1. Demographic data of the patients.

Demographic Variable	n	%
Sex		
Male	23	71.9
Female	9	28.9
Age		
<30	23	72
30 - 50	5	16
>50	4	12
Occupation		
Students	12	37.5
Civil servants	4	12.5
Business	11	43.4
Artisans	2	6.3
Others	3	9.4

patients on admission, 5 (15%) brought or bought the drugs by themselves while 1 (5%) were given by a non-clinical staff of the hospital. Some of the reasons for the use and abuse of drugs include: to reduce/eliminate pain (45%), to aid sleep (15%), to relax 10%, to assist healing 25% and others 5% which includes recommendation by loved ones, increases strength, protection from evil. Average duration of hospital stay was 4 weeks, ranges between 2 weeks to 12 weeks. One patient reported vomiting and diarrhea from the use of an herbal medication while on admission. No report of other untoward effects or hypersensitivity reaction to the drugs while on admission, no report or incidence of drug overdose. Using the chi square at 95% confidence interval, there is a statistically significant relationship between abuse and misuse of drugs and younger age, P-value is 0.0035. patients age less than 30 years were more likely to use or abuse drugs while on admission than the older ones. There is however no statistically significant relationship between

duration of hospital stays and use or misuse of drugs, P-value is 0.79.

4. Discussion

Drug use and abuse are most commonly seen among males, who are also more likely to report it than females [21] [22], our study shows a high male patient involvement in drug use and abuse than among females admitted in our wards; this may be because more males who are already involved in drug use and abuse are admitted in orthopedic wards after injuries from fights or drug influenced accidents, who will subsequently try to offer other patients when they complain of pain and or difficulty sleeping. Males are also more likely to be adventurous in trying other drugs or substance in search of treatment or relieve.

The commonest drugs use and abuse in our wards are opioids (tramadol 8.0% and codeine 3.5%), antibiotics (flagyl 4.5% and Ampiclox 5.4%) and traditional medications 7.1%. Globally, there is an increase in substance use and abuse among people, most especially younger ones [23] [24], it appears that even hospital environment isn't exempted from such creeping disaster as seen in our study. Peer pressure and environments play a major role in the spread of this ill and the hospital environment is not an exception, some patients end up collecting such drugs from their co patients and patient relatives. Others are been brought to them by family and friends while other patients purchased it by themselves often times on the complain of pain or difficulty sleeping at the suggestion of those already using the substance. Pain and difficulty in sleeping are important risk factors for substance use and abuse [25]-[27].

Other drug use and misuse include antibiotics and tradition medications. Antibiotic misuse is one of the main causes of antibiotic resistance, a raging problem [28] [29].

Traditional drug/concoction are also common drugs use and misused among admitted patients in our wards, many patients said to use them to help aid healing, dispel evil spirits from the wound/injuries or just on recommendation of loved ones and friends. Some of those traditional drugs can be herbal or non-herbal, liquid base or powder and they can be ingested, rubbed or smoked. Traditional drug use has been shown to cause drug-drug interaction with conventional drugs affecting both the efficacy of treatment and exposing the patients to possible adverse drug reactions [30] [31].

While there is significant relationship between drug use and abuse and age of the patient on admission, there is no statistically significant relationship between that and duration of hospital stay. There is currently no study on substance use and abuse among in-patients to further support this finding, thus, more studies involving larger sample size and longer duration will be needed to further understand these findings and behaviors among admitted patients.

5. Conclusions

It is important to look closely at drug use and abuse among in-patients with a view to understanding the way by which it spreads in order to stop such cycle of ills

and help prevent the patients from its deleterious outcomes.

More studies involving a larger number of patients and for longer period are needed to further understand this problem and how best it can be handled.

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Ethical Approval

Ethical approval was obtained from the ethical board of Abubakar Tafawa-Balewa University Teaching Hospital, Bauchi to conduct the study.

Authors' Contributions

All authors have been directly involved with the various aspects of the study. We attest to the fact that all authors have participated in the research, read the manuscript, and attest to the validity and legitimacy of the data.

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Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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