Evaluation of Common Complaints and Prescribed Drugs in the Orthopedic

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ABSTRACT

Introduction: Pharmacotherapy is an important part of maintaining one’s health. Medications are used to manage symptoms, control disease progression, and prevent new diseases in many situations. Drug usage studies have proved extremely useful in determining the effects of medications and prescribing patterns on healthcare. They are essential for using evidence-based medicine and making healthcare decisions.

Aim: To assess the prevalence of patient complaints and drug prescriptions in the orthopedics

Study Design: Cross-sectional Study

Place and Duration: Bolan Medical complex Hospital Quetta Balochistan, Pakistan from June 2019 to June 2020

Methodology: Patients aged 12 to 80 years old who visited the orthopedic department were included with convenience sampling strategy. Prescriptions of 377 patients were evaluated. Data was collected on a predesigned form downloaded from the WHO website. Pharma Guide was used to assess the generic names of the prescribed drugs. SPSS version 20 was used for descriptive analysis.

Results: The results showed a higher number of males, 61.53% (n=232), and in the age group of 61 and above. Lower back pain was reported in 165 (43.76 %) of the patients. Total 95 (25.19%) patients came due to fractures. A total of 377 prescriptions were written, with 1925 medications being prescribed. This equates to an average of 5.10 pills per patient. Analgesics, Gastroprotective medicines and Antibiotics were prescribed in 751 (39.01%), 394 (20.46%) and 371 (19.27%) prescriptions, respectively.

Conclusion: Multidrug prescription is very common. Analgesics, stomach acid inhibitors, and antimicrobials are commonly used in orthopedic outpatient department (OPD).

Key Words: Drug Prescriptions, Orthopedics, Outpatient department, Medicines, Vital, Medications

INTRODUCTION

Pharmacotherapy is a vital part of maintaining one’s health. Medications are used to manage symptoms, control disease progression, and prevent new diseases in many situations. While medication can be helpful in maintaining health, they all have the potential for adverse effects; therefore, balancing the risks vs the benefits of using a particular prescription is an important aspect of pharmacotherapy. ¹,²

Drug usage studies have proved extremely useful in determining the effects of medications and prescribing patterns on healthcare. They are essential for using evidence-based medicine and making healthcare decisions. Irrational drug use raises treatment costs, increases antimicrobial resistance, increases the risk of side effects, and lowers patient mortality.³,⁴

Orthopedics is an important area of a tertiary-level hospital, where patients with musculoskeletal ailments are treated. Musculoskeletal problems are most common while people are between 18 and 30 years and then gradually grow as they

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become older, especially after the age of 40. Moreover, in old age, low backache and joint stiffness are common causes of discomfort. Arthritis of various forms can also appear in the elderly and cause problems for individuals. Cold orthopedics problems refer to various elderly orthopedic disorders that are mostly treated with medications and must be continued for a more extended period. Diseases also progress with age, and waxing and waning are common. These cold orthopedic disorders affect more than 40% of patients who visit the orthopedics OPD.

In general, studies in orthopedics departments are primarily focused on surgical techniques. Limited studies are performed on drug prescription and distribution. Rarely such studies are undertaken due to a communication gap between nonclinical pharmacologists and clinical, surgical orthopedics consultants who are engaged mainly in surgeries and have less time for talks on rational drug therapy.

Drug utilization studies aid in discovering novel ways to execute rational drug therapy and areas for improvement in terms of better, more effective, and cost-effective treatment with fewer side effects and less suffering for patients. Rational use of medicines (RUM) is a global concern that assesses pharmacological accessibility, availability, and proper prescribing. Implementation of RUM becomes more significant in developing nations like Pakistan, where financial resources are sparse and patients' affordability is low. So drug usage evaluation is critical for clinical, economic, and educational objectives.

This study aims to assess the prescribing pattern of different types of medicines in the department of Orthopedics.

**METHODOLOGY**

This cross-sectional study was performed Bolan Medical Complex Hospital Quetta Balochistan, Pakistan from June 2019 to June 2020. A convenience sampling technique was utilized for this study. Ethical approval was taken from the ethical review committee of the university. Patients between 12 to 80 years who came to the orthopedic department were included. Patients referred from other departments were excluded. Moreover, those individuals who underwent any surgical procedures in the last three months were also excluded. Demographic data, OPD number, age, sex, generic or branded pharmaceuticals, dose, duration, and mode of drug administration, whether or not from the essential drug list, diagnosis, comorbid conditions/diseases, and treatment were recorded in a predesigned form. Pharma Guide was used to assess the generic names. Desktop and Online version of Pharma Guide was also used. SPSS version 20 was used for descriptive analysis.

Total 403 prescriptions were approached, but 26 prescriptions were discarded due to discrepancies, and 377 were further analyzed. In the current study, we found that males were 61.53% (n=232). The maximum number of the patients was in the age group of 61 years and above. (As shown in Table 1).

We found that the primary complaint of a significant number of individuals was Cervical and radicular pain in the lower back. It was reported by 43.76% (n=165) patients. It is trailed by fractures or follow-up visits due to the fracture (25.19%). Muscular pain was reported by 5.83% (n=22) of the patient. (As shown in Table 2)

We evaluated that in 377 prescriptions, 1925 medicines were prescribed. That makes an average of 5.10 medicine per patient. Analgesics were the most prescribed medications. Analgesics were prescribed in 37.45% (n=721) of the cases, followed by Anti-Acidity drugs, that was prescribed 394 times. Antibiotics were recommended in 19.27% of the prescription. (As shown in Table 3)

<p>| Table 1: Demographic characteristics of the Patients (n=377) |</p>
<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>232</td>
<td>61.53</td>
</tr>
<tr>
<td>Females</td>
<td>145</td>
<td>38.46</td>
</tr>
<tr>
<td>Total</td>
<td>377</td>
<td>100</td>
</tr>
<tr>
<td>Age Group (Years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below 15</td>
<td>35</td>
<td>09.28</td>
</tr>
<tr>
<td>15-30</td>
<td>41</td>
<td>10.87</td>
</tr>
<tr>
<td>31-45</td>
<td>89</td>
<td>23.60</td>
</tr>
<tr>
<td>46-60</td>
<td>93</td>
<td>24.66</td>
</tr>
<tr>
<td>61 and Above</td>
<td>119</td>
<td>31.46</td>
</tr>
</tbody>
</table>

| Table 2: Primary Reason to Visit the Orthopedic Department |
|----------------------|-----------|------------|
| Cause of the Visit   | Frequency | Percentage |
| Cervical and radicular pain in the lower back | 165 | 43.76 |
| Fracture or follow-up | 95        | 25.19      |
| Cervical Spondylitis | 32        | 08.48      |
| Arthritis and osteoporosis | 35 | 09.28 |
| Muscular Pain        | 22        | 05.83      |
| Miscellaneous        | 28        | 07.42      |

<p>| Table 3: Prescribed medicines to the patients |</p>
<table>
<thead>
<tr>
<th>Drug</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analgesics</td>
<td>751</td>
<td>39.01</td>
</tr>
<tr>
<td>Antimicrobials</td>
<td>371</td>
<td>19.27</td>
</tr>
<tr>
<td>Inhibitors of gastric acid</td>
<td>394</td>
<td>20.46</td>
</tr>
<tr>
<td>Muscle relaxants</td>
<td>149</td>
<td>07.74</td>
</tr>
</tbody>
</table>
DISCUSSION

According to the findings of the current study, analgesics are the most commonly given drugs. Every patient was prescribed analgesics followed by anti-acidity medicine and antibiotics. In the current study, we found that the number of prescribed drugs is relatively higher. It has been shown that the average number of medicines in a prescription is more than five.

The current study observed that the maximum number of patients came with cervical and radicular pain in the lower back. Similar findings were stated in a retrospective study. These findings are in line with the previous studies performed in the Kingdom of Saudi Arabia, India, and Pakistan. Back pain is the most prevalent symptom among patients visiting orthopedic clinics, even though the incidence and range of symptoms vary by region. Moreover, studies have reported backache is also linked to physical labour, long working hours, mental stress, poor posture, and job discontent. In our study, most individuals belonged to low socioeconomic status. We found that fractures or follow-up visit after the fracture was followed by lower back complaints. These findings are also in agreement with the findings of the previous study results. Prescription of analgesics alone or in combination with other analgesics is reported in previous studies. NSAIDs are the most often prescribed medications for treating pain and inflammation worldwide, and this study confirms this. Despite their widespread clinical use, NSAIDs’ gastrointestinal toxicity remains a severe drawback. As a result, gastroprotective drugs are co-prescribed with them. Analgesics were found to be co-prescribed with gastroprotective medicines in this study. And we observed that gastroprotective medicine is the second most prescribed drug. Similar findings were reported in other studies. According to a Japanese study, most orthopedists give some sort of medication to prevent ulcers caused by NSAIDs.

Antibiotics were administered to one-fifth of the patients in this study. A study in Pakistan where the prescription of general practitioners was evaluated reported that antibiotics are the most prescribed medications.

In the current study, we observed that an average of around five drugs was prescribed per patient. Another study performed on the consultants of Karachi reported that the average number of drugs for prescription was 4.51. Moreover, a recent study conducted to compare the average number of drugs per prescription in public and private hospitals reported that in government hospitals, on average, 7.14 medicines are prescribed. In the public sector, it is 5.40. These results collaborate the findings of the current study. Findings of an Iranian study reported that on average, orthopedics prescribes 2.6 drugs per prescription. These findings contradict the findings of our study. The number of drugs per prescription would be modest in an ideal world, resulting in a low frequency of drug interactions and side effects. Inappropriate prescribing can be seen worldwide, and they are to blame for a rise in adverse medication responses, resistance development, resource waste, morbidity, mortality, and therapeutic costs.

Pharmacologists and concerned departments should hold regular workshops, lectures, and ward visits on rational drug prescription in a creative, indirect persuasive manner, without hurting anyone’s ego or self-respect. The patient is the ultimate beneficiary. The patient’s best interest is the hospital’s best interest. Such investigations should be conducted on a larger scale where the number of patients should be higher. Prescription audit studies should be done regularly.

CONCLUSION

Analgesics, stomach acid inhibitors, and antimicrobials are commonly used in Orthopedic OPD. Over prescription is highly prevalent. Back pain is the most prevalent symptom among patients visiting orthopedic clinics, even though the incidence and range of symptoms vary by region. The number of drugs per prescription would be modest in an ideal world.

Consent

Informed written consent was taken from patients before starting treatment.

Ethical Approval

Ethical approval was taken from the ethical review committee of the university.

Conflict of Interests

Authors have declared that no competing interests exist.

Source of Funding: NIL

REFERENCES