ANTIBIOTICS DISPENSED AT DRUGSTORES FOR MILD CASES OF COVID-19 PATIENTS IN NORTHERN PUNJAB, PAKISTAN

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INTRODUCTION

The drugstores experience more patient traffic because of the reason that they are the initial point of advice and information in healthcare for the general community. Patients avoid physical meetings and consultations with their doctor and seek nearby drugstores to get advice and medication for their ailments [1] Pharmacists have a central role in COVID-19 disease prevention and management.

During the early phase of COVID-19 in China, the pharmacists were leading thespians in providing awareness and education about COVID-19 to the public [2]. In the United States, community pharmacists continued to provide acute and chronic disease management services which are critical in times of COVID-19 hostilities in the country [3]. Also, in India, despite a complex healthcare system, the pharmacists were well prepared to provide necessary medications and other healthcare services at the community level during the first spike of COVID-19 [4].

AIMS & OBJECTIVE

The practices at the drugstores were evaluated to determine the level and type of antibiotics dispensed in mild Covid-19 scenario.

METHODOLOGY

Study Design: A simulated client cross-sectional study was conducted at drugstores located in two major cities of the Punjab Province namely Lahore and Rawalpindi.

Sampling and Sample Size: The drugstores were selected randomly from the registered list of 3947 drug outlets in Lahore city, and 1970 drugstores in Rawalpindi, apart from the wholesalers and distributors. The final sample size by using the Raosoft application came out to be 362 drugstores; 242 were selected from Lahore and 120 were chosen from Rawalpindi.

Simulated Scenarios: The mild symptoms of COVID-19 such as slight fever, cough, a slight difficulty in breathing, and a loss of taste or smell (with no other complications or illness) were presented at the drugstores. Two age groups of suspected COVID-19 patients (10 year old child and 27 year old adult) were selected as disease scenarios for simulated visits.

Data Collection Procedure: The simulated clients visited the selected drugstores and presented themselves as relative of a patient experiencing mild symptoms of Covid-19. After exiting the drugstore, they noted down the information provided related to safety measures and medicine use.

Statistical Analysis: Frequency and percentages (%) were used to present data. A Chi-square test was also used to determine the differences in practices between the two cities and between each disease scenario presented.

RESULTS

Characteristics		Frequency (n)	Percentage (%)
Disease Scenario	Covid-19 Children	181	50.0
	Covid-19 Adults	181	50.0
Visited Cities	Lahore	242	66.9
	Rawalpindi	120	33.1
Drugstore category	Medical Store	181	50.0
	Pharmacy	181	50.0
Drugstore Type	Independent Drugstore	325	89.8
	Chain Drugstore	37	10.2
Licensed Pharmacist on Duty	No	266	73.5
	Yes	96	26.5
Was the attending staff a licensed pharmacist	No	323	89.2
	Yes	39	10.8
Gender of attending staff	Female	11	3.0
	Male	351	97.0
Age of attending staff	Less than 30 years	188	51.9
	30-50 years	158	43.6
	More than 50 years	16	4.4

Table 1: Characteristics of Drugstores

Sr #	Characteristics		Disease scenario presented: COVID Child n (%)	COVID Adult n (%)	p-value
1	Licensed Pharmacist on Duty	No	131 (72.4)	135 (74.6)	0.721
		Yes	50 (27.6)	46 (25.4)	
2	Inquired Further About Patient's Condition	No	108 (59.7)	109 (60.2)	1.00
		Yes	73 (40.3)	72 (39.8)	
3	Guided about COVID-19	No	90 (49.7)	74 (40.9)	0.113
		Yes	91 (50.3)	107 (59.1)	
4	Dispensed Medication	No	10 (5.5)	25 (13.8)	**0.013**
		Yes	171 (94.5)	156 (86.2)	
5	Antibiotic Dispensed	No	43 (23.8)	69 (38.1)	**0.004**
		Yes	138 (76.2)	112 (61.9)	
6	Provided Patient Counseling	No	13 (7.2)	32 (17.7)	**0.004**
		Yes	168 (92.8)	149 (82.3)	

Table 2: Differences in practices for disease scenarios

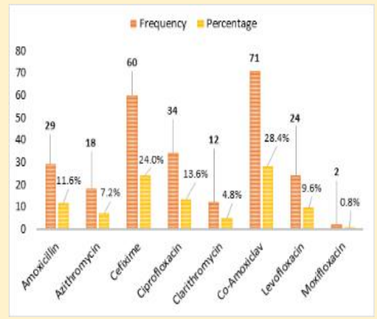

Figure 1: Antibiotics Dispensed by Drugstore Staff

DISCUSSION

The study was the first of its kind and explains the loopholes in the inappropriate disease management of COVID-19 patients by the pharmacy workforce in Pakistan. The results revealed that regardless of a difference in the socioeconomic status and the quality of healthcare facilities in different cities, the poor practices were noticeable at the drugstores in terms of the neglected attitude of the pharmacy workforce about irrational prescribing of antibiotics for the mild symptoms of the disease. Mild symptoms do not require treatment with antibiotics, antivirus drugs, and drugs like chloroquine and hydroxychloroquine [5]. Antibiotics were dispensed in approximately 70% of the simulated visits. The World Health Organization (WHO) guidelines for the clinical management of COVID-19 and International Pharmaceutical Federation (FIP) guidelines for pharmacists and pharmacy workforce also do not recommend the use of antibiotics for the mild cases of COVID-19 and, instead, advise the administration of antipyretics for mild disease management.

A recent research conducted in 31 commonwealth countries on needs assessment and impact of COVID-19 on pharmacy professionals have indicated that two-thirds of the professionals expressed their worries and difficulties of being an efficient health worker during the COVID-19 pandemic [6] The extensive use of antibiotics remained a serious concern in our study. This mismanagement could be because of the unavailability of a qualified person at a large number of drugstores, poor knowledge of the pharmacy workforce, or due to less interest of the customers or drugstore staff in engaging discussions and debates related to health issues.

CONCLUSION

The study revealed extensive availability of antibiotics at the drugstores for mild cases of Covid-19; more frequently in children. Therefore, strategic priority of the National Action Plan on AMR to mitigate use of antibiotics and to restrict their availability by prescription should be implemented as a moral and legal obligation to eradicate growing levels of resistant microbes in the community.

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