

BRIEF REPORT

**PURCHASING MEDICATIONS WITHOUT PRESCRIPTIONS, USING
ERRONEOUS AND EXPIRED PRESCRIPTIONS IN TWO SELECTED
COMMUNITY PHARMACIES IN SRI LANKA**

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Abstract

Background

A valid prescription with specified standards should be used to purchase most medicinal drugs. However, these rules are often violated in community pharmacies (CP).

Objective

The objectives of this study were to study the purchase of prescription only medicine (POM) without prescriptions, use of expired prescriptions and incomplete prescriptions in CPs in a selected locality of Sri Lanka.

Method

An observational study was conducted in two CPs in a semi urban area, in Galle, Sri Lanka. Purchasing behavior and quality of prescriptions were observed.

Results

A total of 1939 occurrences of purchasing medicines were observed. Of all purchases, 902 (46.5%) were done without a prescription. Purchase of POM without a prescription occurred in 691 (35.6%) instances. Antibiotics were the most purchased POM without a prescription (22.4%), followed by anti-hypertensives (18.2%). Common antibiotics purchased without a prescription were amoxicillin and co-amoxiclav. From the total prescriptions used in purchasing (1037), 426 (41.0%) were unsuitable for use in purchasing due to expired duration of the drug regimen and lack of date or duration of the regimen. From all prescriptions with date and duration mentioned (824), 351 (42.6%) were refilled (not buying for first time) and 212 (60.4%) refilled prescriptions were invalid as their regimen durations were already expired.



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Conclusions

More than one third of purchases occurring in the CPs studied included purchase of POM without prescription. Many prescriptions were unsuitable to purchase medicine due to expired duration of the drug regime and incomplete prescription without duration or date. Refilling of prescription was done mainly using expired prescriptions.

Keywords: valid prescription, purchasing without prescription, expired prescriptions, erroneous prescriptions

Introduction

Medicinal drugs are classified into four categories as schedule I, IIA, IIB and III according to requirements in the dispensing process. Only schedule I and IIA are considered as over the counter drugs (OCD) and all others are prescription only medicines (POM)¹. According to rules and regulations, only OTC are available to the public without a prescription. Even though the regulations have been established to prevent medicinal drug misuse when purchasing, purchase of POM without a prescription and issuing drugs for erroneous prescriptions are common occurrences in the community pharmacies (CPs). Use of expired prescription to purchase medicines is a known practice in CP in Sri Lanka². We aimed to study the purchase of POM without prescriptions and prescription errors and refilling of expired prescriptions.

Methods

This study was an observational study conducted in two community pharmacies (CPs) in a semi urban area in Galle district in Sri Lanka in January 2017. The day was divided into two sessions for data collection: first session from 9.00am to 1.00pm and the second session 4.00pm to 8.00pm. All instances of drug purchases were observed for five days during the above mentioned time periods. Two investigators (both final year pharmacy

students who had training in CPs) observed the activities in the CPs and recorded the data in Microsoft Excel sheets. Attention was paid to make sure that all customers who purchased during data collection periods were included in the study. Customers who purchased only non-medical items, Ayurveda products and cosmetic products were excluded. T-test and Chi-square test were used for data analysis.

Results

A total of 1939 occurrences of purchasing of medicinal drugs were observed. Purchases were done mainly by male customers (55.5% of purchases).

Purchase of drugs without prescription

Of all the purchases, 902 (46.5%) were done without a prescription. Of these purchases 65% (N=586) POM purchases and 23.4% (N=211) were OCD purchases while the remaining 11.6% (N=105) purchases included both medicinal types. Total occurrence of purchasing POM without prescription was 691(i.e 586 + 105) and this was 35.6% of the total occurrences of medicinal drug purchases.

Further analysis of POM purchased without prescriptions revealed that antibiotics were the most purchased POM (22.4%), followed by anti-hypertensives (18.2%), anti-histamines (12.4%), asthma medication (10.7%) and oral

hypoglycaemic drugs (10.4%). Common antibiotics purchased without a prescription were amoxicillin, co-amoxiclav, ciprofloxacin, cephalexin, azithromycin and cloxacillin. in the order of prevalence.

Losartan potassium was the most purchased single POM without a prescription (8.8%). There were 14 other anti-hypertensive drugs purchased without a prescription. Metformin accounted for 6.7% of all POM purchased without a prescription and atorvastatin accounted for 6.4%. The prevalence of purchase of inhalers without prescriptions was 6.7% of all POM purchased without a prescription. There was one topical preparation within the first five in the list of POM purchased without a prescription (cotrimazole cream, 4.5%).

Validity of prescription

Of the total prescriptions used in purchasing (1037), 426 (41.0%) were not suitable to dispense medicines due to two main reasons; (i) expired duration of the drug regime (n=213, i.e 50% of unsuitable prescription or 20.5% of total prescriptions), (ii) not having the prescription date nor the duration of the prescribed period (n=213, i.e 50% unsuitable prescription or 20.5% of total prescriptions). These prescriptions with expired regime included 31 prescriptions which were older than one year while 10 prescriptions were older than 2 years. The mean regimen duration was 24.79 days for valid prescriptions and 34.46 days for expired prescriptions and this difference was statistically significant (p 0.001, t-test). This suggests that expired prescriptions have a comparatively longer regime duration.

Of all prescriptions with date and duration mentioned (824), 351 (42.6%) were refilled (i.e not buying for the first time). Two hundred and twelve (60.4%) of all

refilled prescription were invalid as their regimen durations had already expired. Refilling was done significantly more often by male buyers (61.5%, p=0.018) than female buyers. Mean regimen duration was 35.82 days for the refilled prescriptions and 20.96 days for the prescriptions that were for first time purchases and this difference was significant (p=0.000, t-Test).

Discussion

Purchasing POM without a prescription is considerably high and accounted for more than one third of total drug purchases done during the study period. Antibiotics were the commonest POM purchased without a prescription in the current study and similar findings were reported in previous studies^{3,4}. Amoxicillin and coamoxiclav were the commonest two antibiotics purchased without a prescription.

Of all prescriptions with date and duration mentioned, 42.6% were not used to buy for the first time. Of the refilling prescriptions, the majority were (60.4%) expired prescriptions. We found that longer regime prescriptions tended to be refilled more often. Longer regimes are prescribed usually for chronic conditions such as diabetes and hypertension and it is noteworthy that they are refilled more often. In addition, drug use for chronic conditions like hypertension and diabetes mellitus were the main POM purchased without prescription. It is worth mentioning that 10 prescriptions were older than 2 years and patients were still using them.

Incomplete prescriptions without the duration and the expiry date of prescription are two major issues. Legally, pharmacy cannot issue medicines for a prescription without duration and date. However, commercially motivated system with less stringent regulations promotes

selling of medicines by pharmacies even for prescriptions without all the required information.

To control the situation and to reduce the undesired health effects, all the three parties involved; patients, prescribers and pharmacies should be aware of the problem and abide by the rules and regulations of the country. Regulatory authorities should be strengthened to assure safe use of medicinal drugs in Sri Lanka.

As a limitation of the study, generalizability of the results is limited since data were collected from only two pharmacies.

Conclusions

More than one third of medicines purchased were of POM without prescription in the studied CPs. 41.0% of the prescriptions were not suitable to dispense medicines due the fact that the drug regime was expired and prescriptions were incomplete without the duration or the date. Majority of refilling was done using expired prescriptions.

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